



A MANAGEMENT PLAN  
For

# FISH SLOUGH

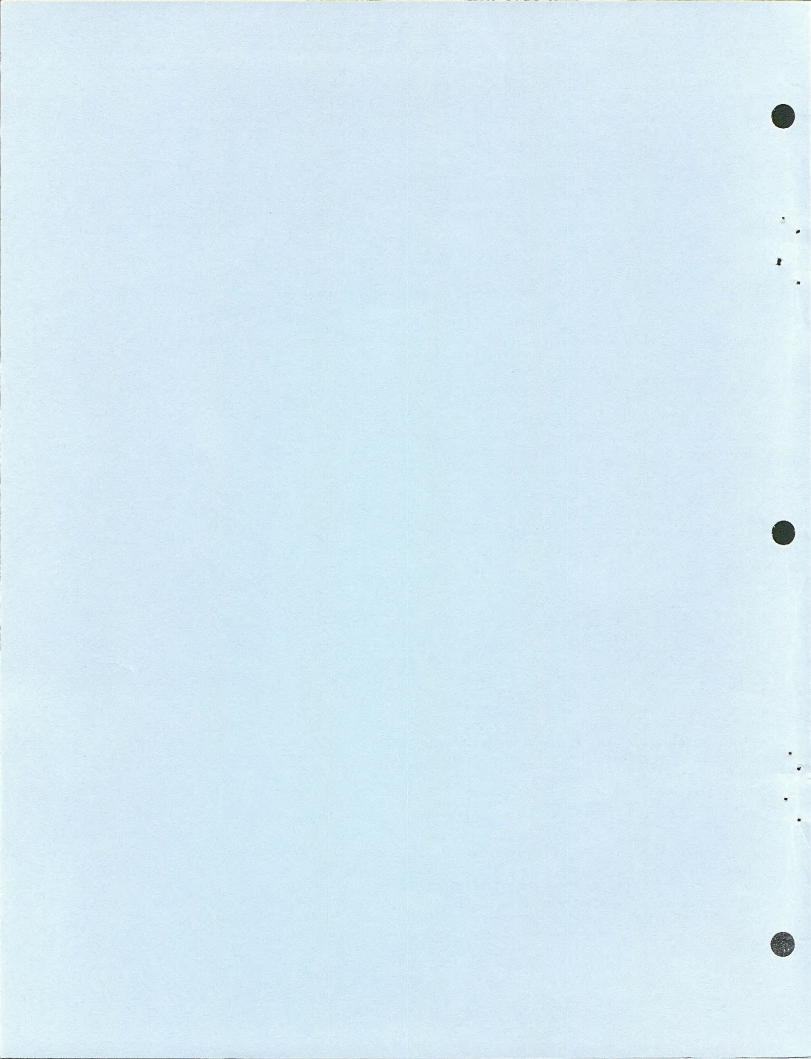
AN AREA OF CRITICAL ENVIRONMENTAL CONCERN



A COOPERATIVE MANAGEMENT PROGRAM

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MANAGEMENT PLAN  
FOR  
FISH SLOUGH

An Area of Critical Environmental Concern

A Cooperative Management Program

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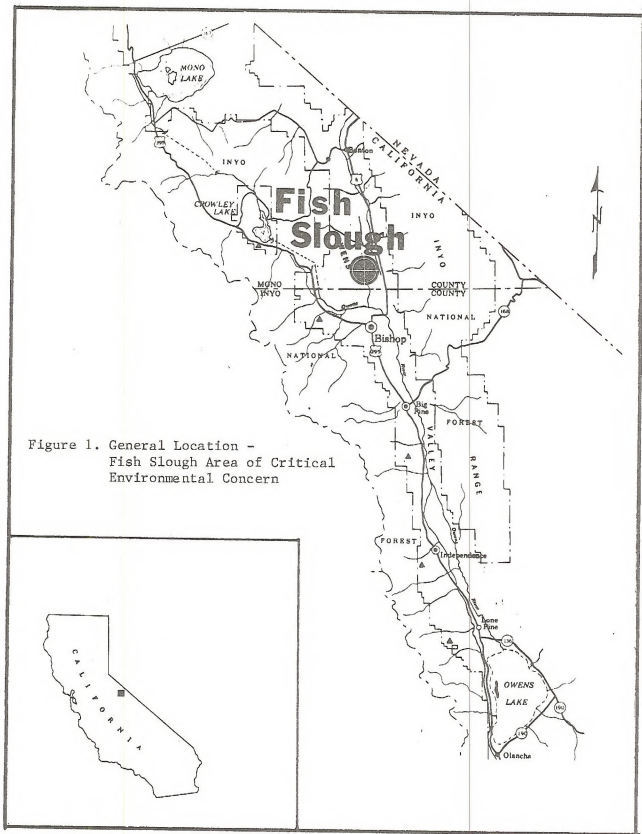


Figure 1. General Location -  
Fish Slough Area of Critical  
Environmental Concern





I. Relevance and Importance Criteria:

In order to qualify as an ACEC, an area must meet the relevance and importance criteria as defined in the Federal Land Policy and Management Act of 1976. An environmental resource can be found "relevant" if special management action is needed to protect or prevent irreparable damage to the resource. An environmental resource can be found "important" if it has qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any like or similar resource. It is also generally of more than local significance. Qualities or circumstances that make such a resource fragile, sensitive, irreplaceable, endangered, threatened, or vulnerable to adverse changes are among causes for concern.

Fish Slough was identified for designation as an Area of Critical Environmental Concern in 1982 by the Benton/Owens Valley Management Framework Plan, Step-3 Decision. A unique desert wetland, Fish Slough provides critical habitat for the federally listed endangered, Owens pupfish (Cyprinodon radiosus). It also provides protected habitat for three additional species of fishes unique to the Owens Valley, at least seven rare plant species or disjunct plant populations, and an undescribed species of mollusc. In addition, the endangered Peregrine falcon (Falco peregrinus anatum) has also been sighted in the Fish Slough area. The uniqueness of Fish Slough goes beyond the important fish, wildlife and vegetation values. Significant cultural and scenic values also warrant special management consideration. The Slough and adjacent hillsides also offer many opportunities for non-intensive recreation. The fragile nature of these resources makes them vulnerable to adverse changes unless a program of protective multiple-use management is designed and implemented.

## II. Purpose and Objectives

Fish Slough has been recognized as an Area of Critical Environmental Concern (ACEC) and this Management Plan is being prepared in recognition of a unique assemblage of resource values (i.e. endangered species, rare plants, wetlands, archaeology) which require special management attention. The purpose of this management plan is to determine how these resources can best be managed and protected, to establish a schedule of implementation for planned actions, to estimate the costs of implementation, and to identify the responsibilities of cooperating agencies. The ACEC designation does not revoke or lessen other management objectives for the area; rather it is intended to supplement and complement them through coordination and cooperation of the various agencies involved in managing the resources unique to Fish Slough.

The Fish Slough area represents the last portion of the Owens Valley floor which is essentially pristine and unaffected by man's influence or environmental change. Originating from the only remaining natural springs on the valley floor it flows southward about seven miles before reaching the Owens River six miles north of Bishop, California. In addition to providing wetland/riparian habitats unique to the area, Fish Slough also supports various endangered or rare fish, plant, and animal species. These include: the Owens pupfish (Cyprinodon radiosus), Owens tui chub (Gila bicolor snyderi), Owens sucker (Catostomus fumeiventris), an Owens Valley form of speckled dace (Rhinichthys oculus ssp.), the Fish Slough milkvetch (Astragalus lentiginosus piscinensis), and several other sensitive plant species or disjunct plant populations; Calochortus excavatus, Centaureium namophilum var. nevadensis, Fimbristylis thermalis, Spartina gracilis, Dodecatheon pulchellum, and Astragalus argophyllus var. argophyllus. An undescribed species of mollusc, the Fish Slough snail (Fontelicella sp.) is also known to occur there. Collectively, the occurrence of these unique species coupled with the abundance of succulent wetland/riparian vegetation within the slough bounded by rocky cliffs and in close association with the drier desert shadscale scrub demonstrates the overall uniqueness of this area.

In addition, the scenic quality of Fish Slough, with its still pools reflecting the warm hue of the surrounding desert, the jagged peaks of the snow capped Sierra Nevada, and the majestic White Mountains, is unsurpassed. The fact that Fish Slough has long been important to humanity and the natural environment is evidenced by no less than four Native American petroglyph sites within the boundaries of the ACEC.

With these important resource values in mind, the Fish Slough ACEC/Management Plan is being prepared. The long range management objectives are:

1. to provide for the cooperative management, protection and/or enhancement of Fish Slough as an ecological natural area;

2. to preserve the integrity of the Fish Slough ecosystem by protecting and maintaining the quality and quantity of the groundwater aquifer which supports it;
3. to preserve and enhance the natural integrity of Fish Slough and its associated habitats (i.e. wetlands);
4. to ensure stable and healthy populations of native plant and animal species of the area;
5. to maintain the characteristics of the existing natural landscape such that contrasts to the basic elements (form, line, color, and texture) when caused by management activities will not attract undue attention;
6. to provide for instruction and research in the natural sciences in harmony with managing Fish Slough as a natural area and as a benchmark of undisturbed habitats for ecological studies related to the Owens Valley.
7. to maintain public access and use of the area in harmony with maintaining the natural integrity of Fish Slough and its associated habitats.

### III. MANAGEMENT PHILOSOPHY

Three management zones have been delineated within the ACEC based upon common resource characteristics, use demands for resources, and special management needs (Figure 2). Within these zones petroglyph sites will be managed for protection, to prevent vandalism, and to discourage other activities which might deface them. The management intent for each zone is as follows:

1. Zone 1 - Fish Slough Ecological Area.

This zone includes the Owens Valley Native Fish Sanctuary, BLM Spring, and the main feeder springs, slough, and marsh of Fish Slough proper. This zone will be managed to 1) preserve and enhance the natural integrity of Fish Slough and its associated habitats (i.e. wetlands), and, 2) to ensure stable and healthy populations of native plants and animals of the area. Management measures include allowing the development of surface facilities only to the extent necessary to implement the management plan, managing visitor use, and increasing ranger patrols or visits by cooperating agency personnel to discourage vandalism or defacing of protection facilities, and monitoring and evaluating grazing limitations, water quality and quantity, and populations of species of special concern.

2. Zone 2 - Volcanic Tablelands: western aquifer.

This zone includes the area to the northwest of Fish Slough proper, but is within the surface drainage basin to it. This zone will be managed to protect its scenic value and the quality and quantity of surface and groundwater which support Fish Slough. Protective measures for resources include enforcing motorized vehicle restrictions, grazing limitations, and allowing surface development only to the extent that they do not impair visual quality.

3. Zone 3 - Volcanic Tablelands: northern aquifer.

This zone includes the area to the north of Chidago Canyon to Red Rock Canyon, west of Hammil Valley. This zone will be managed to protect and preserve the quality and quantity of the groundwater aquifer. Protective measures will include describing and monitoring characteristics of the aquifer and possibly limiting groundwater wells.

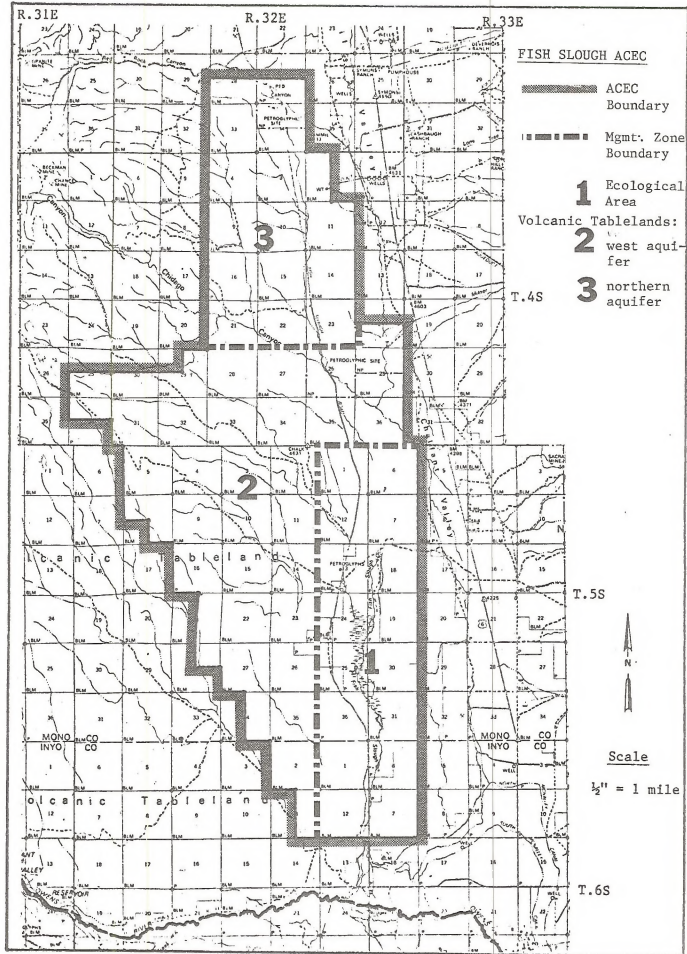


Figure 2. Management Zones - Fish Slough Area of Critical Environmental Concern.

#### IV. Summary of Major Recommendations

- A. Limit vehicle use within the ACEC to designated and/or existing roads and trails. Specific, approved, routes of travel within the management area will be identified.
- B. Erect interpretive signs near the entrances to the ACEC which describe vehicle use restrictions, including a map of approved routes of travel; indicate nearby ORV open areas outside the ACEC; and describe the unique resource values of the ACEC.
- C. Construct approximately three miles of fence within the Fish Slough grazing allotment area to enclose approximately 200 acres of public land for wildlife habitat protection. (T 5 S., R. 33 E., Sec. 31 W $\frac{1}{2}$ ).
- D. Develop a cooperative livestock grazing program so that grazing use is compatible with the overall management of crucial areas within the ACEC.
- E. Increase patrols and visits by cooperating agency personnel to the ACEC to protect resource values and management facilities.
- F. Install observation wells to monitor and record trends in water table fluctuations.
- G. Install recording gaging stations at the Owens Valley Native Fishes Sanctuary, BLM Spring and the northeast spring to monitor and record trends in water flow.
- H. Record and monitor meteorological conditions within the Fish Slough Ecological Area.
- I. Describe surface water and groundwater characteristics within the ACEC, including physical and chemical characteristics, aquifer recharge, flow regime, etc.
- J. Notify appropriate State water control agencies of the ACEC and the importance of the water resources to it. Supply appropriate recommendations for site specific projects as needed.
- K. Construct informational signs at the Owens Valley Native Fish Sanctuary and BLM Spring describing resource values present within Fish Slough and their sensitivity to disturbance.
- L. Design improvements within ACEC Management Zones 1 and 2 (the Fish Slough Ecological Area and the Volcanic Tablelands: western aquifer) so as not to detract from the natural landscape characteristics.
- M. Remove exotic species (i.e. largemouth bass, bullfrogs, etc.) from the Owens Valley Native Fish Sanctuary (OVNFS) and BLM Spring.

- N. Manage the OVNFS and BLM Spring as ecological preserves limiting fish and amphibian populations to those species native to the Owens Valley.
- O. Encourage paleontological and archaeological research within the boundaries of the ACEC.
- P. Develop a research plan and conduct ecological studies of Fish Slough for application to management.
- Q. Establish a Joint Management Committee composed of a representative of each of the five cooperating parties to this plan for the purpose of reviewing and coordinating management activities within the ACEC.
- R. Develop and implement a monitoring program.

## V. Background and Resource Summary

The ACEC is focused around Fish Slough in southern Mono and northern Inyo Counties, California. Its northernmost spring source is within section 18, T.5S., R.33E. MDBM from which it flows southward about seven miles before entering the Owens River six miles north of Bishop.

### A. Access:

The Fish Slough ACEC encompasses 35,926 acres of public lands situated between the Sierra Nevada Mountains to the west and the White Mountains to the east. It is oriented north-south, with dimensions of 15½ miles in length and a maximum width of seven miles. State Highway 6, running north from Bishop, California and subsequently, Fish Slough Road provide the primary means of access to both northern and southern portions of the area. An unimproved dirt road provides access to the central portion of the ACEC from State Highway 6 in Chalfant Valley to the northern spring source in Fish Slough proper.

Several additional rugged roads and trails transect the area originating off Fish Slough road.

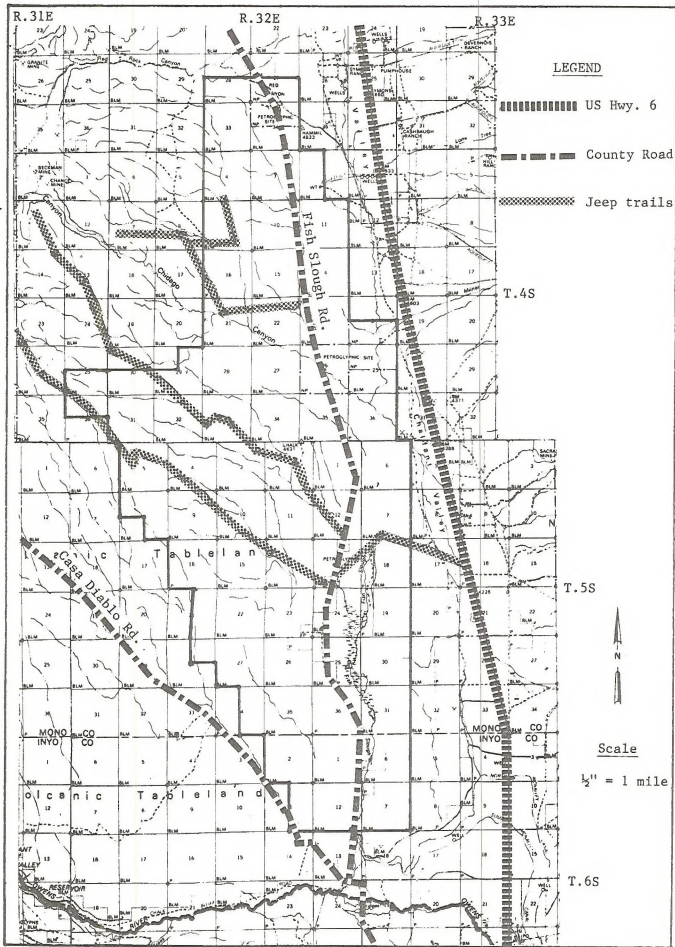
### B. Administrative History:

Since the mid 1960's Fish Slough has been recognized for its pristine nature and its significance as the last remaining refuge of the Owens pupfish. The Owens Pupfish was listed as an endangered species in 1967 and the Owens Valley Native Fish Sanctuary established in 1968 for its protection. An additional refuge was established at BLM spring in the summer of 1969. In 1975 a draft cooperative management agreement was prepared for the Fish slough area and was to be between the Bureau of Land Management, California Department of Fish and Game, Los Angeles Department of Water and Power, and the University of California. Although this agreement was never signed or implemented it embodied the spirit of cooperative management for Fish Slough and was the catalyst for this planning effort.

### C. Land Status

Public lands administered by the Bureau of Land Management comprise the majority of the ACEC management area. The State maintains a school section in Zone III along with a 168.24 acre parcel in T.6S. R.33E, Section 6 administered by the California Department of Fish and Game. All of the property owned and





managed by the Los Angeles Department of Water and Power occurs in Zones I and II. A breakdown of land status within the management area is as follows (see also Figure 4):

<u>Ownership/Administration</u>	<u>Zone I</u>	<u>Zone II</u>	<u>Zone III</u>	<u>Total</u>
Bureau of Land Management	6,626.95	17,086.01	8,638.91	32,351.87
Los Angeles Department of Water and Power	1,165.93	1,600.00	0	2,765.93
State of California	168.24	0	640.00	808.24
Totals:	7,961.12	18,686.01	9,278.91	35,926.04

There are two Executive Orders and two Acts of Congress overlapping public lands (see Figure 5):

E.O. 5631 - Withdrawn for Municipal Water Supply purposes.

E.O. 5843 - Withdrawn for classification and in aid of Legislation.

E.O. 10355 - Withdrawn for public purposes.

Act of Congress 03/04/1931 - Withdrawn for the Protection of Watershed.

Act of Congress 06/23/1936 (LA 087404) - Application to purchase for the City of Los Angeles.

Act of Congress 01/08/1983 - Withdrawn for the Protection of Watershed.

These acreages are withdrawn from settlement, location, entry and disposal under public land laws - all are open under mineral laws.

D. Historical Use:

The Fish Slough area has been occupied by man for several thousand years. Prior to Anglo contact in the mid-nineteenth century, the area was occupied by the Numic speaking Owens Valley Paiute. Ethnographic work by Julian Steward indicates that the Fish Slough area was primarily utilized by the Pitana patii (south place) band, as an Indian ricegrass collecting area. The extent to which Fish Slough was directly involved is unknown, however, historical use by Native Americans is evident by the numerous petroglyph sites within the management area.

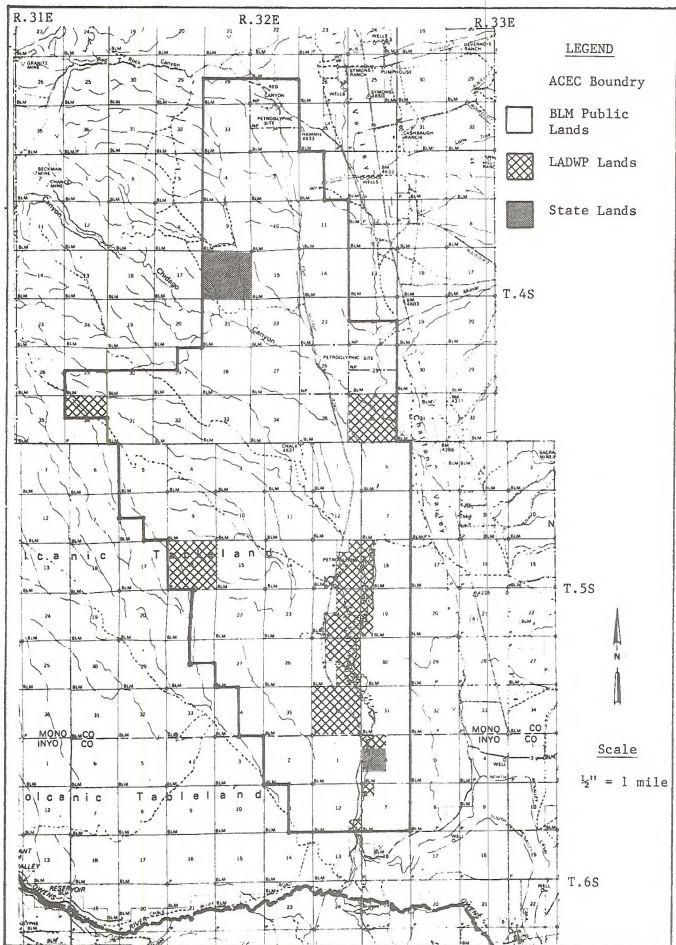


Figure 4. Land Status - Fish Slough ACEC

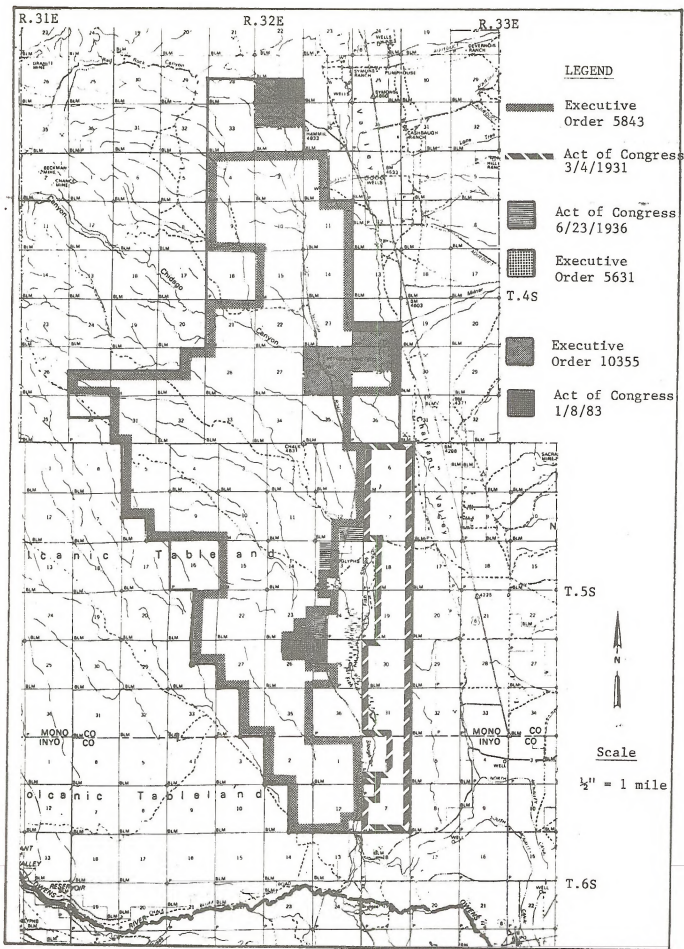


Figure 5. Public Land Withdrawals - Fish Slough ACEC

Historically, the first Anglo settlers in the Fish Slough area were ranchers. Stockmen came to the area in search of free pasturage for their cattle. The most recent human influence on the area has been the City of Los Angeles' need for the water resources of the Owens Valley. Los Angeles emerged from the aqueduct controversy as the dominant force in the Owens Valley and remains so today. The City got the water it needed by acquiring most of the Valley floor and by securing public land withdrawals on most of the remainder to protect its watersheds. Under these conditions Fish Slough has such activities occurring as hunting, fishing, and livestock grazing at relatively moderate levels.

E. Geology:

Formations in the management area range from Quaternary volcanics to Quaternary and late Tertiary surficial deposits.

In the late Pleistocene, 710,000 years ago, the Long Valley caldera erupted depositing a 14 foot layer of pumice over the landscape as far south as Bishop. This was followed by the eruption of nees ardentes (clouds of glowing ash suspended in rapidly expanding superheated vapors) which spread outward from the perimeter vents of the caldera. The erupted ash filled local depressions and buried small knobs and ridges to form a sheet of smooth surface relief averaging 400 to 500 feet thick. The resulting sheet extended 70 miles, from Mono Lake in the north to Bishop in the south (Jeff Kennedy, unpublished). Subsequent to the eruption a complex series of events took place resulting in the formation of the Bishop tuff.

The structure of the Bishop tuff is significant to the problem of establishing ecological boundaries for Fish Slough because it forms the surface layer (and in some places the only layer) of the aquifer. Thus, while the slope and conformation of the basement complex will most likely determine the gross direction of groundwater flow through the overlying alluvium and pumice, the hydrologic characteristics of the Bishop tuff will have a dominant influence on the flow at or near the surface of the watertable which feeds the springs of Fish Slough. Infiltration into the tuff and groundwater flow through it is greatly facilitated by the deep conjugate shear joints formed when the sheet sagged and compacted during welding and by the shallower joints which formed later from thermal stresses during cooling. These later joints are randomly oriented and shallow (9 to 15 meters deep), while the former joints exhibit a preferred bimodal orientation (generally northwest and northeast) and are an order of magnitude deeper (Kennedy, unpublished). Thus, much of the surface watershed is apparently underlain by a depositional basin which tends to channel subsurface water towards Fish Slough and the adjacent springs.

The surface of the Volcanic Tableland almost everywhere parallels internal layering in the Bishop Tuff. Generally, the most conspicuous structures are steep, north-trending fault scarps. The largest scarp, along the east side of Fish Slough, is more than five miles long reaching a maximum height of about 300 feet. A few other faults occur, as much as three miles long and 200 feet in height, although most are less than a mile long and 50 feet high.

Just east of the Fish Slough scarp the upper surface of the Tableland is broken by a closely spaced group of faults, some downthrown to the west and some to the east. Most of the faults west of Fish Slough are arranged in northwest trending parallel systems.

#### F. Hydrology and Water Quality:

The surface of the Fish Slough area has been characterized as a "fossil landscape" which was formed during a wetter climatic regime. At present surface runoff into Fish Slough is rare because of the arid climate and the highly porous and permeable nature of the underlying Bishop tuff. Measurements by the California Department of Water Resources (DWR Bulletin 126, 1964:42-43) indicate that some units of the Bishop tuff are more permeable than wind-blown sand. Furthermore, a comparison of known inputs and outputs to the hydrologic system reveals that almost 80% of the precipitation input shows up as surface outflow at the mouth of Fish Slough, leaving very little for other outputs such as evapotranspiration and subsurface outflow. Since precipitation rapidly and deeply infiltrates to the water table below the effective zone of evapotranspiration, the entire surface of the Volcanic Tableland functions as a recharge surface for the underlying aquifer. The dominant transport mechanism for the hydrologic system appears to be subsurface flow, except as forced to the surface as spring flow by fault zone barriers.

Since surface flow into Fish Slough is not a significant component of the hydrologic system, it is the boundary of the surrounding subsurface aquifer and associated recharge areas that should determine the perimeter of the Fish Slough management area. In determining the effective boundaries of the aquifer, the basal pumice layer of the Bishop tuff takes on special significance. Its high porosity and permeability enable it to function as a low resistance conduit for subsurface flow within the aquifer. Since the basal pumice conforms to the topography of the landscape buried by the Bishop tuff its conformation as modified by subsequent faulting and warping influences the groundwater flow forming subsurface "watersheds" which compartmentalize the aquifer.

The collective evidence embodied in the faulting, structure and formations of the Bishop tuff indicate that the effective boundaries of the aquifer recharge area feeding Fish Slough do not coincide with the boundaries of the surface watershed. The recharge area appears to be split into two lobes. One lobe, to the northwest, falls within the boundary of the surface watershed while another appears to extend to the north of Fish Slough (Figure 6).

The quality of the surface waters in the management area varies with the sampling site. The furthest upstream spring source in Fish Slough had good water quality for all types of use when sampled in June 1962 and again in April 1964. Other springs had good water quality except that the fluoride level was moderately high (1.2 mg/l) for domestic use when measured in April 1962. These springs also had high total dissolved solid levels but this does not adversely limit water use. Water quality measured approximately one mile from the Owens River confluence, indicated high fluoride and sodium levels. The former constituent adversely affects domestic use and aquatic life, while the latter affects irrigation use (Courtois and Tippets, 1979).

Measurements of ground water quality within the Fish Slough drainage are lacking. Analysis of a well  $\frac{1}{4}$  mile east of the northernmost spring gave no indication of water quality problems (California Department of Water Resources, 1946).

#### G. Vegetation:

The Fish Slough management area contains a rich and distinct series of plant assemblages, varying in response to moisture availability and terrain. In the marsh itself extensive areas are covered with bulrush (Scirpus spp.), cattails (Typha spp.), rushes (Juncus spp.) and saltgrass (Distichlis spp.). At the northern end there are some willows (Salix spp.) and scattered cottonwoods (Populus fremontii). The associated, more xeric, environment is dominated by the shadscale scrub community, including saltbrush (Atriplex spp.) and rabbitbrush (Chrysothamnus, spp.).

Botanical data are far from being complete at this time. However there are several sensitive plant species or disjunct plant populations known to occur in the ACEC area. They are Astragalus lentiginosus piscenensis, Calochortus excavatus, Centaureum namophilum var. nevadensis, Spartina gracilis, Astragalus argophyllus var. argophyllus, Fimbristylis thermalis and Dodecatheon pulchellum. The first three species named are candidate species for listing as Endangered or Threatened under the Endangered Species Act of 1973.

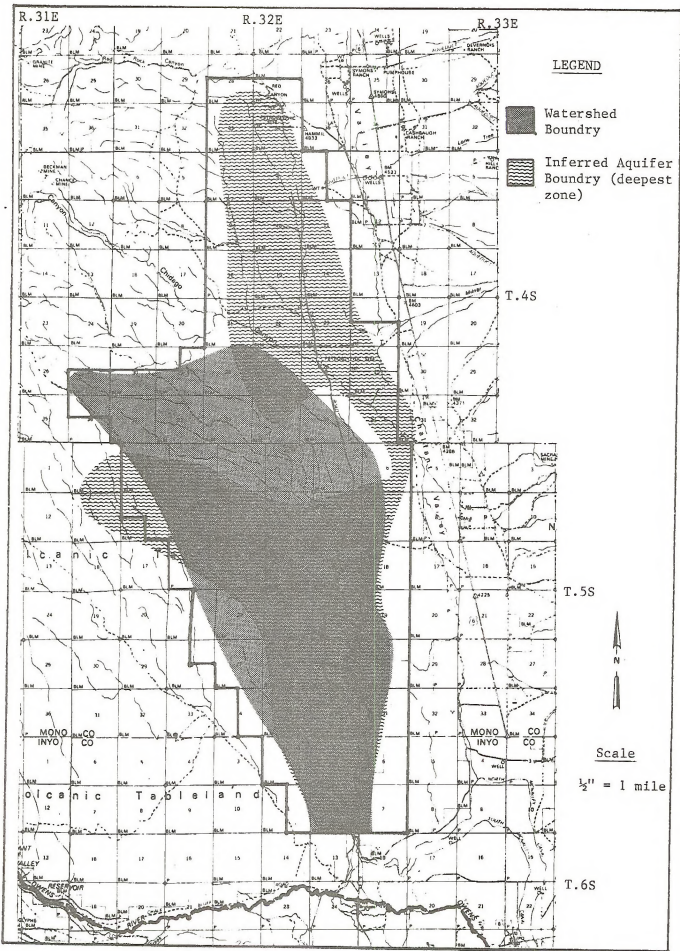


Figure 6. Hydrologic Boundaries - Fish Slough ACEC



#### H. Wildlife:

The Fish Slough management area contains a rich and diverse fauna. The relatively isolated stretch of permanent surface water and associated habitats which characterize Fish Slough and the adjacent drainage have resulted in both high species diversity and the presence of several forms of limited distribution. This is exhibited by several vertebrates of highly localized occurrence which are found in the area including the federally endangered Owens pupfish (Cyprinodon radiosus), the Owens Valley form of speckled dace (Rhinichthys osculus spp.), Owens tui chub (Gila bicolor snyderi), and Owens sucker (Catostomus fumeiventris). An undescribed species of aquatic snail, the Fish Slough snail (Fontellicella sp.) is also known to occur in the Owens Valley Native Fish Sanctuary spring outflow and in northeast spring (USFWS, unpublished).

In addition to those species listed above a variety of wildlife species dependent on wetland habitat during at least part of their life cycle are found here including such birds as black-birds, marsh wrens, ducks, and raptors (including the golden eagle, Aquila chrysaetus, and prairie falcon, Falco mexicanus). Rocky cliffs line both sides of the marsh, providing excellent perching and nesting sites for the raptors. One active prairie falcon nest is known in the area. The abundance of succulent vegetation throughout the summer months in a surrounding dry area makes this marsh attractive to a variety of rodents, and as a consequence, predators such as bobcats and coyotes are not uncommon in the area.

#### I. Cultural Resources:

The proposed Fish Slough ACEC roughly corresponds to an area designated in the Benton URA III as having a "very high" probability for the occurrence of cultural resources. Site types known to occur are temporary camps, shelters, milling stations, lithic scatters, pottery sherd scatters, petroglyph sites, and historic sites. Semi-permanent village sites may occur in the area as well.

Local Native American groups have expressed concern regarding sites in the area. Of particular interest to Native Americans are petroglyph sites. The Bishop petroglyph Loop Cultural Resource Management Plan has been prepared, and focuses on the four sites comprising the Bishop Petroglyph Loop. Sites eligible for Historic Places are known to occur in the area (Figure 7).

#### J. Recreation:

The Fish Slough management area offers unique recreational opportunities for semi-primitive activities including hiking,

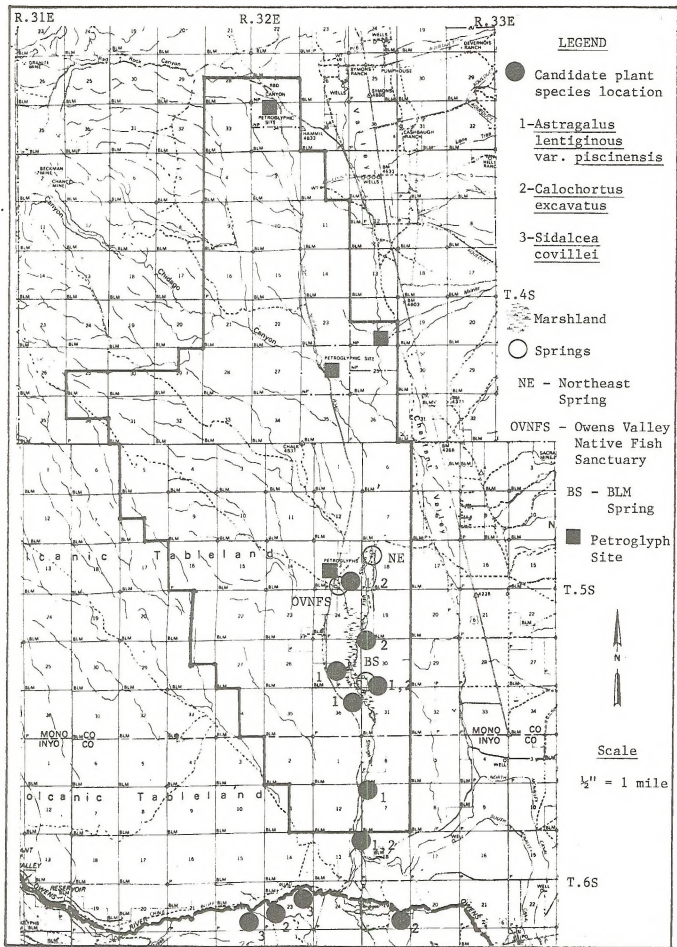


Figure 7. Primary Resources - Fish Slough ACEC

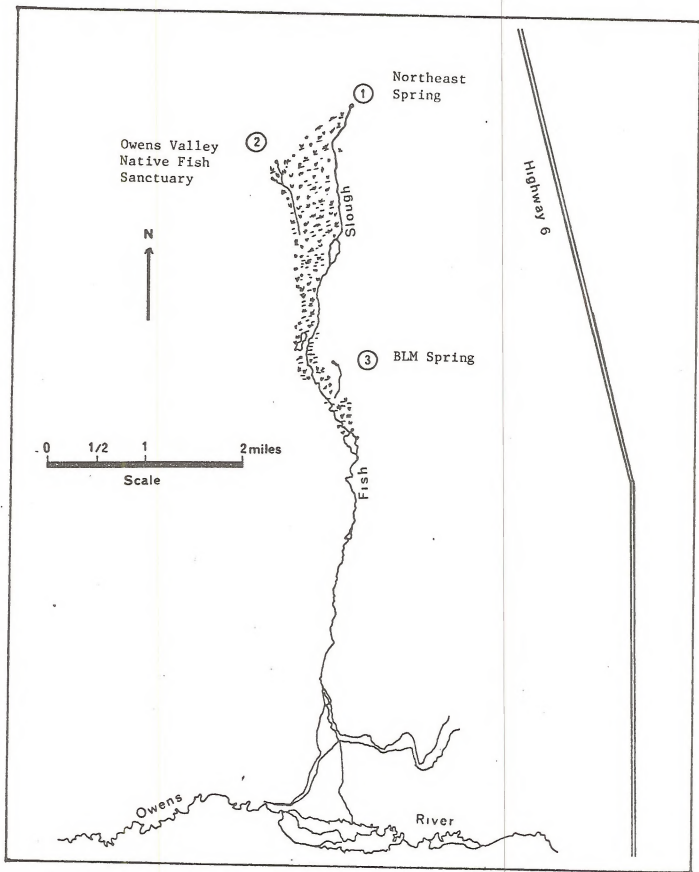


Figure 8. Major Spring Sources of Fish Slough

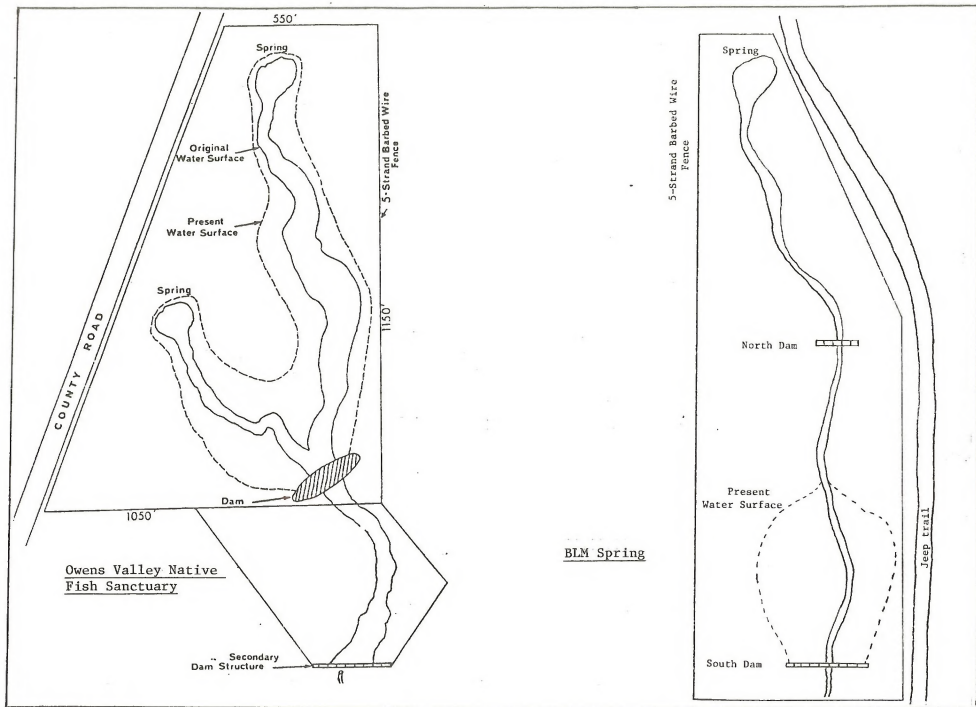


Figure 9. Detailed sketches of the Owens Valley Native Fish Sanctuary and BLM Spring Refuges.

nature study, sight-seeing, photography, hunting and fishing. Motorized vehicle use, however, is limited to designated roads and trails.

Visually, the management area offers a variety of scenic resources. The Slough itself and its adjacent cliffs have Class B or "moderate" scenic quality. It is also managed as Visual Resource Management (VRM) Class III, which means that changes caused by management activities may be evident in the characteristics landscape but should remain subordinate to it. A contrast may be seen but should not attract undue attention. Due to the presence of surface water, abundant vegetation, and massive cliffs surrounding the slough, coupled with the Sierra Nevada to the west and the White Mountains on the east, the area is scenically unique to the west. There are several vehicle ways, Fish Slough road being the most noticeable, however, these generally do not detract from the area's naturalness.

The Volcanic Tableland portion of the management area has Class B or "moderate" scenic quality. It is managed as VRM Class IV, which means that contrasts caused by management activity attracts attention and may be a dominant feature of the landscape in terms of scale, but should repeat the characteristics of the landscape.

Portions of the management area lie within Wilderness Study Areas (WSA's) 79, 80, 81, and 82 Chidago Canyon, Fish Slough, Volcanic Tablelands and Casa Diablo, respectively. These are extremely diverse WSA's which include, rolling hills, sheer cliffs and the marsh lands of Fish Slough. The Fish Slough portion of the WSA's has been affected primarily by natural forces, with man's impacts substantially unnoticeable (Figure 8).

Because of the extreme diversity in both terrain and plant type the ACEC has outstanding opportunities for solitude. Despite being only 6 miles north of Bishop the area has substantial topographical screening and is of such size as to be able to keep visitors apart. Special features which complement the wilderness characteristics include riparian and wetland vegetation, wildlife, paleontological, cultural, scenic, and educational opportunities.

K. Range:

As has been the case throughout the west there is a demand for grazing lands within the ACEC management area. Most lands suitable for grazing whether private or public, have been used as such.

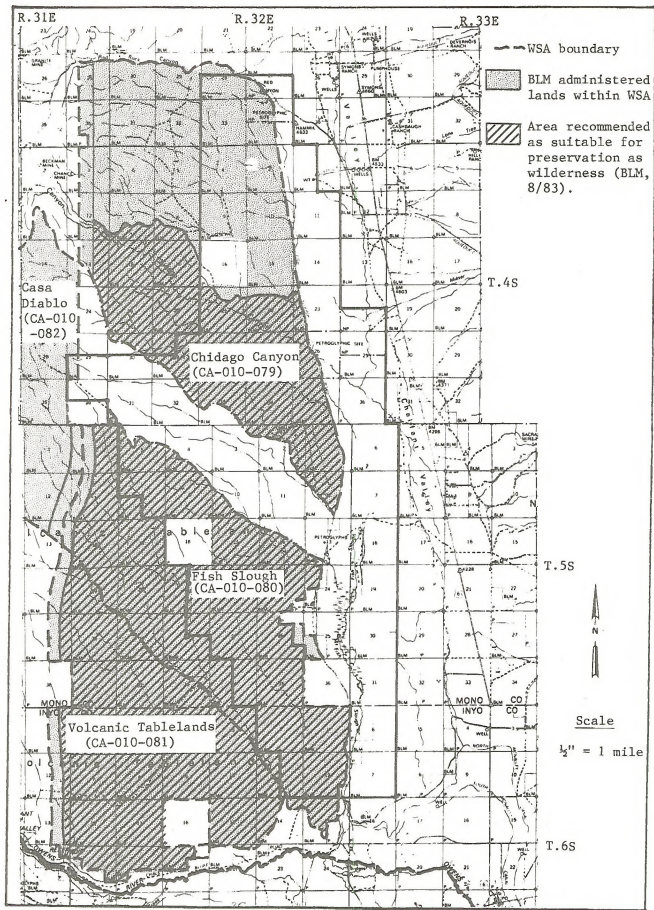


Figure 10. Wilderness Study Areas and areas recommended as suitable for wilderness within the Fish Slough ACEC.

All or part of five existing BLM grazing allotments fall within the ACEC (Figure 9). The majority of land within the Fish Slough grazing allotment is owned by the Los Angeles Department of Water and Power and is leased for grazing.

The five existing BLM grazing allotments are:

BLM Allotment Number	Allotment Name	Season of Use	Public	Public	Non-Public	Total
			Land AUMs	Land Acres	Land Acres	
6004	Fish Slough	11/1-5/31	29	1,713	2,335	4,078
6007	Volcanic Tablelands	5/1-6/31	3,888	46,546	1,280	47,826
6024	Hammil Valley	6/15-2/28	1,964	39,156	3,400	42,556
6030	Chalfant Valley	10/1-5/15	399	13,080	5,943	19,023
6043	Chalk Bluff	10/1-5/15	555	15,667	680	16,347

The percent of each allotment in each ACEC zone is:

Allotment Number	Allotment Name	Zone	Zone	Zone
		I	II	III
6004	Fish Slough	58%	42%	-
6007	Volcanic Tablelands	4%	35%	2%
6024	Hammil Valley	-	4%	18%
6030	Chalfant Valley	15%	3%	-
6043	Chalk Bluff	6%	-	-

The Volcanic Tablelands grazing allotment is the only sheep allotment with the other four being grazed by cattle.

Current range conditions have been rated as fair overall with the aquatic marsh ecological range site, in Fish Slough itself, rated as good.

The remaining two allotments, Chalfant Valley and Chalk Bluff, occur along the eastern edge of the ACEC (zones I and II) with the boundary extending along the crest of the steep scarp forming the eastern edge of Fish Slough itself.

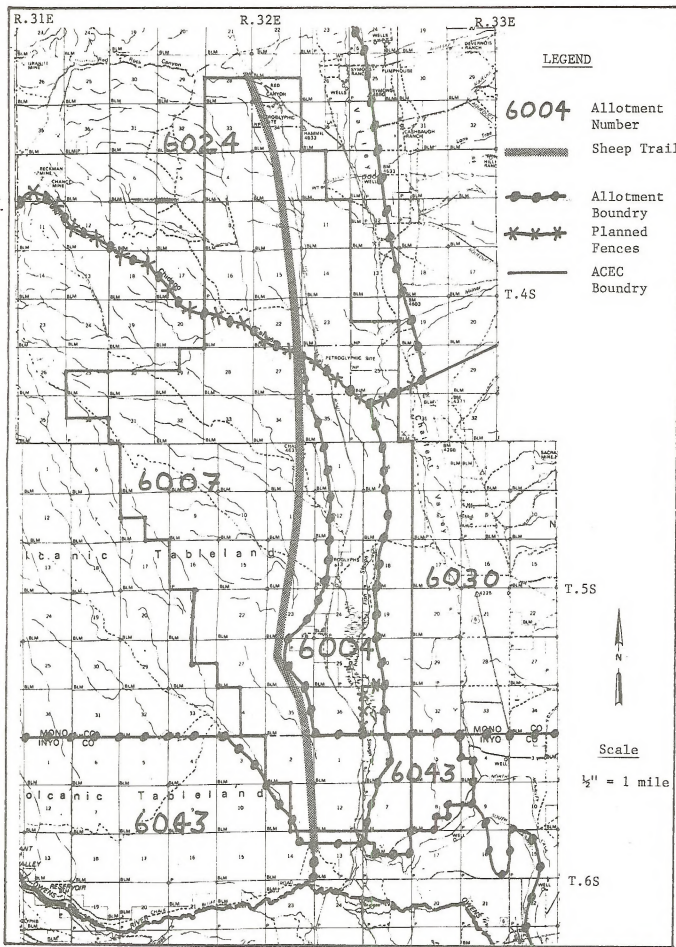


Figure 11. Range Management Facilities - Fish Slough ACEC



VI. Planned Actions:

Planned management actions preceded by an asterisk (\*) will be implemented as a Wildlife Habitat Management Plan for this area. Implementation phases are: Phase I = years 1 and 2 of plan implementation; Phase II = years 3 and 4; and, Phase III = year 5 and beyond.

1. Goal: Provide protection to sensitive resources and natural values of the area while allowing for reasonable vehicle access.

Action: Limit motorized vehicle use within the management area to designated and/or existing roads and trails. Identify specific approved routes of travel within appropriate designated areas. Erect interpretive signs near the north and south entrances which describe vehicle use limitations and indicate nearby locations outside of the management area where off-road vehicle "free-play" activities are permitted.

Discussion: Limiting motorized vehicle use within the area through posting of signs and increased information on alternative areas where use is allowed should serve to reduce chances of any deleterious effects associated with this form of recreation. The use of this area for ORV "free-play" is inconsistent with the high sensitivity of area resources and class guideline restrictions. Limitations on vehicle use within the central slough area are consistent with the vehicle use designation of 1983 (FR 10/06/83), objectives of this management plan, and continued protection of this fragile ecosystem.

Implementation: Begin posting signs along the management area boundary during Phase I. Sign post placement and construction will be of heavy duty design using metal posts to minimize vandalism which has occurred using more conventional signing methods. Also during Phase I specific approved routes of travel where applicable will be identified. During Phase II, additional signs notifying visitors of vehicle use limitations will be placed as necessary by Bureau personnel to replace vandalized signs and to allow for increased visitor awareness.

- \* 2. Goal: Provide for added protection of crucial wildlife habitat within Fish Slough.

Action: Construct approximately three miles of fence to create a 200 acre enclosure for added wildlife habitat protection within Fish Slough (T. 5 S., R. 33 E., Sec. 31, W½)

Discussion: This enclosure will provide an added sanctuary for wildlife and is being implemented as part of the Benton-Owens Valley MFP decision. In addition, this enclosure will provide a control for range management research and for scientific studies.

Implementation: This action will be completed in Phase I.

3. Goal: Reduce adverse impacts in livestock grazing activities near and within wetland habitats.

Action: a) Construct necessary fence separating the Volcanic Tablelands and Hammil Valley allotments within the ACEC. b) Determine grazing allocation, if any, and proper grazing management measures to be applied in harmony with the management philosophy for the ACEC in the Fish Slough Allotment (No. 6004). c) Minimize trailing and sheep grazing activities from adversely influencing habitat conditions in the area thru strict adherence to allotment boundaries and/or trailing permit stipulations.

Discussion: Some of these actions was identified in BLM's Benton-Owens Valley Management Framework Plan Decision (1982) for Livestock Grazing Management. These livestock grazing actions should minimize any adverse effects to wetland and aquatic habitats and yet provide some opportunities to utilize available range resources.

Implementation: Actions a and b will be completed in Phase Action. c will be a continuing effort.

- \* 4. Goal: Provide for adequate resource management that will protect resource values and management facilities within the ACEC through development of a cooperative livestock grazing program.

Action: Develop a cooperative livestock grazing program to include all allotments, or portions of allotments, within its boundaries, current management measures, land management agencies and operators within the ACEC.

Discussion: This action will review current livestock grazing practices and develop a cooperative management program within the ACEC.

Implementation: Complete development during Phase II.

- \* 5. Goal: Increase management presence to decrease chances of vandalism and unlawful activities in the area.

Action: Increase California Fish and Game warden, LADWP and Bureau personnel visits to the area. Inform users through personal contacts about the resource values within the ACEC. Explain reasons for changes and why necessary.

Discussion: Increased contact with users will reduce vandalism and increase the chance of user acceptance to changes and regulations.

Implementation: Two visits each week by management personnel should be scheduled. Interpretive talks and brochures will be used as tools in educating users. This action is scheduled for Phase I.

- \* 6. Goal: Establish a baseline and monitor the aquifer which support Fish Slough.

Action: Install observation wells to record trends in water table fluctuations.

Discussion: The underlying aquifer is by far the most significant factor controlling conditions in the Fish Slough Ecological Area. Very little hard data is currently available to document the extent and hydrologic characteristics of the aquifer and their effect on Fish Slough.

Implementation: This action will be initiated in Phase I with installation of observation wells in the Fish Slough Ecological Area (Zone I). Wells in Zones II and III will be installed during Phase II.

- \* 7. Goal: Establish a baseline and monitor water flows within Fish Slough.

Action: Install recording gauging stations at the northeast spring, the Owens Valley Native Fishes Sanctuary, and at BLM Spring to monitor and record trends in water flow.

Discussion: These springs are critical to the Fish Slough ecosystem and can be used as indicators of the overall conditions within the Slough. Maintenance of flows at "normal" levels is critical to this program.

Implementation: Surface gauging systems and a monitoring program will be designed and implemented by hydrologists of the cooperating agencies. This action will be completed in Phase I.

8. Goal: Establish a baseline and monitor meteorological conditions within the Fish Slough Ecological Area (Zone I).

Action: Install a meteorological station within the Fish Slough Ecological Area (Zone I) to record meteorological conditions there.

Discussion: Most, if not all, information concerning meteorological conditions within the Fish Slough Valley must presently be inferred from other sources. It is felt that to really understand the dynamics of the Fish Slough ecosystem we must also understand the prevalent meteorological conditions which play a major role in ecosystem function.

Implementation: The meteorological station will be installed during Phase I.

- \* 9. Goal: Describe surface water and groundwater characteristics within the ACEC, including physical and chemical characteristics, aquifer recharge, flow regime, etc.

Action: Conduct a study to describe surface water and groundwater characteristics within the ACEC.

Discussion: Very little is known about the surface and groundwater characteristics within the ACEC. A better understanding will enhance future management efforts not only for the ACEC but for the Owens pupfish as well.

Implementation: This action is scheduled for Phase II.

- \* 10. Goal: Provide for protective management of the Fish Slough watershed and aquifer to insure stability of natural resources present in the management area which are dependent upon continued water flow.

Action: Notify appropriate State water control agencies of the importance of the Fish Slough watershed and aquifer in the maintenance and protection of sensitive wildlife resources within the management area. Provide review and develop mitigation measures for projects to prevent degradation or loss of these resources on a site-specific basis.

Discussion: Many wildlife species and habitats of special management importance which are present within the management area are heavily dependent upon the flow and quality of water into Fish Slough. Reductions in water supply, or deterioration in water quality from uses entirely outside of the management area could have a catastrophic impact upon these resources. Management actions designed to protect these resources should therefore be concerned with the protection and maintenance of this water source.

Implementation: Notify the State Water Resources Control Board, Division of Water Rights and California Regional Water Quality Control Board, Lahontan Region, during Phase I of plan implementation. Supply appropriate recommendations for site-specific projects as needed.

- \* 11. Goal: Provide for increased public awareness and understanding of the unique resources which occur within the ACEC.

Action: Construct informational signs at the Owens Valley Native Fish Sanctuary, BLM Spring, and at the northern and southern entrances to the Fish Slough ACEC describing resource values present and their sensitivity to disturbance.

Discussion: Many visitors may not be aware of the many unique resources present within the ACEC. Informational facilities would help to "educate" users about these values and the steps which must be taken to preserve them.

Implementation: This action will be implemented during Phases I and II.

- \* 12. Goal: Maintain the Owens Valley Native Fishes Sanctuary and BLM Spring as ecological preserves for all species native to the Owens Valley.

Action: Remove exotic species (i.e., largemouth bass, bull-frogs, etc.) from the Owens Valley Native Fishes Sanctuary and BLM Spring.

Discussion: This action would be consistent with the natural or pristine nature of Fish Slough and would provide a refuge for aquatic species native to the area. Exotic species are fairly abundant throughout California, including the Owens Valley and Fish Slough.

Implementation: This action is scheduled for Phase I and would most likely be a continuing effort. Removal efforts will be coordinated by the Department of Fish and Game with assistance by cooperating agencies.

- \* 13. Goal: Gain a broader understanding of the ecological conditions and natural resource values which occur within the ACEC.

Action: Conduct a baseline resource inventory, develop a research plan, and conduct specific ecological studies throughout the ACEC.

Discussion: There is a wealth of information yet to be learned about the ACEC and the resource values found there. In addition, as the last area in a relatively pristine condition within the Owens Valley the ACEC can serve as an "outdoor classroom" of sorts providing vast opportunities for natural history studies and research. This coupled with the need (by congressional mandate) to manage public lands on a multiple-use basis should provide excellent opportunities to learn management strategies which would allow for multiple-use yet preserve unique resources.

Implementation: These actions will begin in Phase I and continue indefinitely. The University of California will provide the leadership in coordinating these studies with the resource management agencies, providing reports as necessary.

14. Goal: Gain a better understanding of prehistoric natural conditions within the ACEC.

Action: Actively pursue paleontological and archeological research within the ACEC Management Area.

Discussion: Very little is known about the prehistoric conditions of the Fish Slough Area. Research will locate prehistoric resources and help define the prehistoric conditions of Fish Slough.

Implementation: Phases I - III.

- \* 15. Goal: Maintain a dynamic management program within the ACEC consistent with overall management objectives.

Action: Establish a Joint Management Committee composed of a representative of each of the five cooperating parties to this plan to meet at least once a year. The committee shall develop basic guidelines for general land use within the ACEC.

Discussion: A flexible management scheme is necessary for the ACEC so that we may utilize a greater understanding of resource interrelationships while striving toward our overall goals and objectives. As new information becomes available or conditions change within the ACEC it will be necessary to review planned actions and coordinate management activities. The spirit of cooperative management embodied within the draft cooperative agreement and this plan will also be maintained by establishing a joint management committee.

Implementation: This action will be implemented in Phase I. Initially, the committee will be chaired by the representative of the Bureau of Land Management. Chairmanship may rotate among representatives of the cooperating parties.

- \* 16. Goal: Determine the effect of management actions on the Fish Slough ACEC.

Action: Develop and implement a monitoring program for the ACEC.

Discussion: It is essential that the effects of management actions, as well as levels of visitor compliance with management regulations, be assessed annually by appropriate resource specialists. If a given action is ineffective, it should be modified or eliminated. If monitoring shows the need for additional protective measures, these should be instituted. Also, if low levels of compliance occur, additional actions will be necessary to prevent further degradation of sensitive resources and to increase levels of public cooperation.

Implementation: Evaluate cultural, vegetational, wildlife, and visual resources and user compliance as outlined in Section VII. Prepare a report annually which documents the monitoring findings.

## VII. Evaluation and Monitoring Program:

The evaluation and monitoring program for the Fish Slough ACEC will involve an adaptive approach to environmental management which includes identifying several "key" issues and resources for study. Specific monitoring actions will be developed as part of planned action 16 above. The monitoring program will deal with the effectiveness of the management plan in meeting its stated objectives as identified in this report. Recreational resources will be monitored by patrols, and establishment of visitor registers. The cultural program will be primarily concerned with monitoring specific sites for damage incurred as the result of present uses, and providing for increased protective measures such as fencing or signing where appropriate. Vegetation will be monitored using a system involving establishment of ground level transects to assess trends in plant species composition. Surveys locating and mapping populations of sensitive plant species will also take place. Wildlife resources will be monitored through a program involving use of breeding and wintering bird study plots especially in riparian habitats along Fish Slough and assessments of fish species to determine trends in species composition and abundance.

The continued presence of wetland habitats critical to this ACEC is directly dependent upon the flow and quality of water into Fish Slough. Therefore, water quality will be monitored by periodic sampling of selected stations by a hydrologist.

Reductions in water supply or deterioration in water quality from uses entirely outside of the management area could have a profound catastrophic impact on its resources. Monitoring actions specified in this management plan therefore concern not only assessments of the effectiveness of planned actions but also concern monitoring actions designed to gauge trends in water quality, related aquatic habitats, and wildlife species heavily dependent upon these habitats. Where monitoring studies indicate downward trends, respective water control agencies responsible for water resources will be notified so that corrective actions may be taken where possible. These agencies include the State Water Resources Control Board and the California Regional Water Quality Control Board, Lahontan Region.

In addition, the State Water Resources Control Board and the California Regional Water Quality Control Board, Lahontan Region, will be notified of the relative importance of water flow within the Fish Slough drainage for the continued maintenance of endangered, rare, or sensitive wildlife species and wetland habitats present. Both water control agencies will be requested to notify the Bureau of Land Management and California Department of Fish and Game of any projects involving surface waters or groundwaters within this management area. Where appropriate, the BLM and/or CDFG may submit recommendations to each agency designed to prevent or to mitigate potential impacts to wildlife resources heavily dependent upon continued water quality and water volume.

VIII. Implementation Schedule and Cost Estimates:

Note: Cost estimates do not include salary estimates for permanent and temporary personnel. Projects preceded by an asterisk (\*) will be implemented as a Wildlife Habitat Management Plan for this area. Implementation phases are: Phase I = years 1 and 2 of plan implementation; Phase II = years 3 and 4; Phase III = year 5 and beyond. WM = workmonths.

Planned Action	Phase	Est. Time for Completion	Est. Cost	Responsibility Agency(ies)
1a. Designate approved routes of travel.	I	$\frac{1}{4}$ WM	0	BLM
1b. Erect interpretation signs near north and south entrances describing vehicle use limitations.	I, II	$\frac{1}{4}$ WM	1,000	BLM
*2. Construct fence around 200 acre enclosure in the Fish Slough grazing allotment area (T. 5 S., R. 33 E., Sec. 31, W $\frac{1}{2}$ ).	I	1 WM	3,000	BLM
3a. Construct fence separating Volcanic Tablelands & Hammil Valley grazing allotments.	I	1 WM	6,000	BLM
3b. Determine grazing allocation and management measures.	I	1 WM	0	BLM
3c. Monitor adherence to allotment boundaries and trailing permit stipulations.	I, II, III	1 WM/yr.	0	BLM
*4. Develop cooperative live-stock grazing program.	I	4 WM	0	BLM <sup>1/</sup> , LADWP



VIII. Implementation Schedule and Cost Estimates (Cont):

Planned Action	Phase	Est. Time for Completion	Est. Cost	Responsibility Agency(ies)
*5. Undertake patrols of the ACEC.	I, II, III	4 WMs/yr.	0	BLM, CDFG, LADWP
*6a. Install groundwater observation wells.	I (Zone I); II (Zone II&III)	5 WM	10,000	BLM, LADWP <sup>1/</sup>
*6b. Record baseline conditions	I	5 WM	0	BLM, LADWP <sup>1/</sup>
*6c. Monitor trends in groundwater.	I, II, III	$\frac{1}{2}$ WM/yr	0	BLM, LADWP <sup>1/</sup>
*7a. Install recording gauging stations at the Owens Valley Native Fish Sanctuary (OVNFS), BLM Spring, and northeast spring.	I	$\frac{1}{2}$ WM	6,000	CDFG, BLM
*7b. Record trends in flow at OVNFS, BLM Spring and northeast spring.	I, II, III	$\frac{1}{2}$ WM/yr	0	BLM <sup>1/</sup> , CDFG, LADWP
8a. Install meteorological station in Zone I.	I	$\frac{1}{2}$ WM	6,000	BLM
8b. Monitor meteorological conditions.	I, II, III	$\frac{1}{2}$ WM/yr	0	BLM
9. Conduct study to describe surface water and ground water characteristics within the ACEC.	II	2 WM	10,000	BLM
10. Notify State water agencies of the importance of maintaining water quality and volume in the Fish Slough watershed and aquifer.	I	$\frac{1}{4}$ WM	0	CDFG <sup>1/</sup> , BLM

VIII. Implementation Schedule and Cost Estimates (Cont):

Planned Action	Phase	Est. Time for Completion	Est. Cost	Responsibility Agency(ies)
11a. Construct informational signs at the Owens Valley Native Fish Sanctuary.	I	½ WM	3,000	CDFG
11b. Construct informational signs at BLM Spring.	I	½ WM	3,000	BLM
11c. Erect informational signs at the northern and southern entrances to the Ecological area.	II	½ WM	3,000	BLM
*12. Remove exotic species from Owens Valley Native Fish Sanctuary and BLM Spring.	I, II, III	½ WM/yr	0	CDFG
*13a. Conduct resource inventories.	I			A11, UC <sup>1/</sup>
*13b. Develop research plan.	I, II			A11, UC <sup>1/</sup>
*13c. Conduct ecological studies.	I, II, III			A11, UC <sup>1/</sup>
14. Conduct paleontological/archaeological research.	I, II, III			BLM <sup>1/</sup> , UC
*15a. Establish Joint Management Committee.	I	½ WM	0	A11, BLM <sup>1/</sup>
*15b. Develop land-use guidelines.	I	1 WM	0	A11, BLM <sup>1/</sup>

VIII. Implementation Schedule and Cost Estimates (Cont):

Planned Action	Phase	Est. Time for Completion	Est. Cost	Responsibility Agency(ies)
*15c. Evaluate adequacy of management actions and redesign prescriptions as needed to preserve resources.	I, II, III	½ WM/yr	0	All
16. Institute a monitoring program.	I	1 WM	3,600	BLM

1/ Agency with lead responsibility



IX. APENDICES



APPENDIX A  
ENVIRONMENTAL ASSESSMENT RECORD  
FISH SLOUGH  
AN  
AREA OF CRITICAL ENVIRONMENTAL CONCERN

prepared by:

Bishop Resource Area  
Bakersfield District  
Bureau of Land Management

September, 1984

## 1.0 SETTING:

The proposed action site is centered around Fish Slough in southern Mono and northern Inyo Counties, California. The Fish Slough ACEC encompasses approximately 36,000 acres of public and private (Los Angeles Department of Water and Power) lands situated between the Sierra Nevada Mountains to the west and the White Mountains to the east. It is oriented north-south, with dimensions of 15½ miles in length and a maximum width of seven miles. The southern boundary of the ACEC is approximately 7 miles north of Bishop, California.

## 2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

- 2.1 Proposed Action - Implement the Management Plan for Fish Slough an Area of Critical Environmental Concern as described in the attached document:

See the attached document for a complete description of planned actions.

- 2.2 Alternative 1 - Implement the Management Plan only for management zones 1 and 2 (see attached document Section III):

This alternative would be similar to the Preferred Alternative except that planned actions to monitor and safeguard the ground-water aquifer supplying Fish Slough would not be implemented.

- 2.3 Alternative 2 - Implement the Management Plan only for management zone 1 (see attached document Section III):

This alternative would involve implementing planned actions only within Fish Slough itself, including the Owens Valley Native Fish Sanctuary, BLM Spring, and the main feeder springs, slough and marsh.

- 2.4 Alternative 3 - No Action:

Acceptance of this alternative would continue the current management practices. While certain elements of the Proposed Action may be implemented under other plans (i.e. Benton/Owens Valley Management Framework Plan, 1982; Owens Pupfish Recovery Plan, 1984; Bishop Petroglyph loop Cultural Resource Management Plan, 1984) a fully coordinated interagency approach would be lacking. Also, the Benton/ Owens Valley MFP, step 3 Decision to designate Fish Slough as an ACEC would not be implemented.

## 3.0 EXISTING ENVIRONMENT:

For a complete description of the existing environment refer to Section IV of the attached management plan.



#### 4.0 ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES:

##### 4.1 Proposed Action:

###### 4.1.1 Anticipated Impacts

- a. Implementation of the proposed action is expected to generally enhance the environmental quality of the proposed Fish Slough ACEC. It is anticipated that significant positive impacts would result, especially to such resources as wildlife, vegetation, water and soils.
- b. Limiting motor vehicle use within the ACEC to approved routes of travel may have a negative impact on the recreational use of the area by ORV'ers. Positive impacts due to increased air quality and a reduction of soils exposed to erosion and/or compaction are expected. Anticipated impacts to other recreational uses, such as photography, hiking, etc., would be positive.
- c. Development of a cooperative livestock grazing program is generally anticipated to have a positive impact in that it would coordinate programs among leasors and operations. At this time it is not anticipated that there will be a significant change in current grazing management systems. If such changes do occur, however, there maybe a negative socio-economic impact to grazing operations within the proposed ACEC. The significance of such action can not be accurately assessed until a grazing program is developed. However, since the intention is to include the operations in the development of the program it is not anticipated that significant socio-economic impacts would result.

##### 4.2 Alternative 1:

###### 4.2.1 Anticipated Impacts

- a. By not gathering baseline information and monitoring groundwater within the northern aquifer of the volcanic tablelands (Zone III of proposed ACEC), significant negative impacts may occur to wildlife, vegetational and water resources within the remainder of the ACEC (especially Zone I).

- b. Studies and monitoring efforts are anticipated to be of significant benefit to wildlife, vegetational and plant resources by providing a better understanding of the interrelationship of the aquifer to Fish Slough. This information is expected to have significant positive impacts on management goals and objectives for Fish Slough.

#### 4.3 Alternative 2

##### 4.3.1 Anticipated Impacts

- a. Anticipated impacts to wildlife, vegetation, and water resources are the same as those described in 4.2.1.
- b. Construction of facilities on the Volcanic Tablelands would reduce visual quality.
- c. Surface waters may be adversely affected by drainage or erosion within the Fish Slough watershed.
- d. Air quality may be adversely affected by not designating specific approved routes of travel for motor vehicles.
- e. Implementation of planned actions only in Zone 1 at one ACEC is anticipated to have beneficial effects to wildlife, especially threatened, endangered or sensitive species.

#### 4.4 Alternative 3 - No Action

Under the No Action alternative there would be no designation of an Area of Critical Environmental Concern and no implementation of a cooperative management plan. Current management practices would continue with no formal effort to coordinate activities among responsible resource management agencies. Stable and healthy populations of native plant and animal species could not be ensured. The preservation and enhancement of the natural integrity of the Fish Slough ecosystem would be in jeopardy.

#### 4.5 Mitigation Measures:

- 4.5.1 Vegetational (rare plant) and archaeological surveys will be conducted at all construction and installation sites for management facilities (i.e., signs, fences, wells, etc.) prior to actual construction or installation. Appropriate measures will be taken to relocate these facilities so as to have no impact on rare plant or significant archaeological resources.

4.5.2 Installation of flow gauging stations at the Owens Valley Native Fish Sanctuary and BLM Spring will be done at the time of year when least impacts to the Owens pupfish is anticipated (winter months).

4.6 Unavoidable Adverse Impacts:

The proposed action would cause (after mitigation) short-term disturbance to some human-intolerant wildlife species.

4.7 Short-Term vs Long-Term Productivity:

The short-term resource impacts caused by the proposed action should not have significant effect on long-term resource productivity.

4.8 Irreversible and Irretrievable Commitments of Resources:

No irreversible or irretrievable commitments of resources are expected.

5.0 CONSULTATION AND COORDINATION:

Copies of this draft environmental assessment have been forwarded, along with the Proposed Management Plan, to the following groups and agencies for review and comment.

California Department of Fish and Game, Los Angeles Department of Water and Power, University of California Natural Reserve System, U.S. Fish and Wildlife Service.

6.0 APPROVAL AND CONCURRENCE:

EA prepared by:

Mike Aceituno  
Mike Aceituno, Fishery Biologist  
California State Office

9/21/84  
Date

Reviewed by:

Bob Beehler  
Bob Beehler, Environmental Coordinator  
Bishop Resource Area

10/5/84  
Date

Approved by:

James J. Morrison  
Jim Morrison, Area Manager  
Bishop Resource Area

10-5-84  
Date

Concurred in by:

H. Edwards  
Bakersfield District Manager  
Bureau of Land Management

10-15-84  
Date



IN REPLY  
REFER TO:

6600(C-017)

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
873 North Main Street, Room 201  
Bishop, California 93514

October 29, 1984

## MEMORANDUM

TO: District Manager, Bakersfield

FROM: Area Manager, Bishop

SUBJECT: Record of Decision for Fish Slough ACEC Designation  
and Management Plan.

1. I have reviewed the proposed designation and management plan and I recommend approval for these actions.
2. This action is supported by and directed by land use plans (Benton-Owens Valley MFP).
3. This action does not require an Environmental Impact Statement.

I concur:

*Roy E. Raschen*  
Assoc. District Manager, Bakersfield

*James S. Morrison*  
Area Manager, Bishop

APPENDIX B

References

1. California Department of Water Resources. 1964. Fish Slough dam and reservoir feasibility investigation. Calif. Dept. Water Res. Bull. 126. 63 p.
2. Courtois, I.A. and W. Tippetts. 1979. Status of the Owens Pupfish, Cyprinodon radiosus (Miller), in California. Calif. Dept. Fish Game Inland Fish End. Prog. Spec. Pub. 79-3. 31 p.
3. Kennedy, J. 1979a. The Importance of the Groundwater Aquifer to Fish Slough: An Ecological Boundary Analysis. Univ. Calif. Nat. Res. Sys. unpublished manuscript.
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5. Sheridan, Michael F. 1970. Fumarolic Mounds and Ridges of the Bishop Tuff, California. Geological Society of America Bull. 81:3, pp 851-868.
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9. ---. 1980a. Benton-Owens Valley Grazing Draft Environmental Impact Statement. Bakersfield District Office. Bakersfield, CA. Dec. 1980.
10. ---. 1980b. Areas of Critical Environmental Concern: Policy and Procedures Guidelines. Washington, D.C. 24 p.
11. ---. 1979. Benton-Owens Valley Unit Resource Analysis. Bishop Resource Area Office. Bishop, CA
12. ---. Fish and Wildlife Service. 1984. Owens Pupfish Recovery Plan (Agency Review Draft). U.S. Fish and Wildlife Service, End. Spec. Office, Portland, Oregon. 42 p.



APPENDIX C

Participating Staff:

The following individuals have contributed to the development and editing of this management plan:

Mike Aceituno	Fishery Biologist, BLM California State Office
Keith Anderson	Fishery Management Supervisor, California Department of Fish and Game
Bob Beehler	Outdoor Recreation Planner, BLM Bishop Resource Area
Randy Benthin	Fishery Biologist, California Department of Fish and Game
Duane D. Buchholz	Northern District Engineer, Los Angeles Aqueduct Division Los Angeles Department of Water and Power
Mike Ferguson	Wildlife Biologist, BLM Bakersfield District Office
Patty Gradek	Hydrologist, BLM Bakersfield District Office
Mark Gish	Range Conservationist, BLM Bishop Resource Area
Jeff Kennedy	Reserve Planner, University of California, Natural Reserve System
Eric Levy	Archaeologist, BLM Bishop Resource Area
Darlene McGriff	Fishery Biologist, California Department of Fish and Game, Endangered Species Office
Phil Pister	Fishery Biologist, California Department of Fish and Game
Russ Rawson	Civil Engineer, Los Angeles Department of Water and Power
Terry Russi	Wildlife Biologist, BLM Bishop Resource Area
J. Roger Samuelson	Director, University of California Natural Reserve System
Richard Teixeira	Geologist, BLM Bishop Resource Area

APPENDIX C (Cont.)

Karen Weaver	Realty Specialist, BLM Bishop Resource Area
Jack Williams	Fishery Biologist, U. S. Fish and Wildlife Service, Endangered Species Office
Darrel Wong	Fishery Biologist, California Department of Fish and Game.



APPENDIX D

Agencies, Organizations, and individuals consulted:

California Academy of Sciences

California Association of 4WD Clubs, Inc.

California Department of Fish and Game, Region 5

California Native Plant Society, Bristle Cone Chapter

California Native Plant Society

California Natural Resources Federation

California Off-Road Vehicle Association, Inc., Southern Regional Director

California Resources Agency

California State Clearinghouse

California Wilderness Coalition

California Wildlife Federation

County of Inyo, Board of Supervisors

County of Inyo, Department of Planning

County of Mono, Board of Supervisors

County of Mono, Department of Planning

Defenders of Wildlife

Desert Fisheries Council

Eastern Sierra Audubon

League of Women Voters of the Eastern Sierra

Los Angeles Department of Water and Power

National Audubon Society, Western Regional Office

Natural Resources Defence Council, Inc.

Sierra Club, CA-NV Representative

Sierra Club, Toiyabe Chapter

The Desert Protective Council, Inc.

The Nature Conservancy, Western Regional Office

U.S. Fish and Wildlife Service, Endangered Species Office

U.S. Fish and Wildlife Service, Ecological Services

National Park Service

University of California, Natural Reserve System

Alice Alpers and Kathleen A. Hadeler

Inyo Sheep Co.

Mendiburn Land & Livestock Co.

Arrache Sheep Co.

Saldubehere and Castanchoa

Alfred Saldubehere

Noreiga Sheep Co.

Harris Bros.

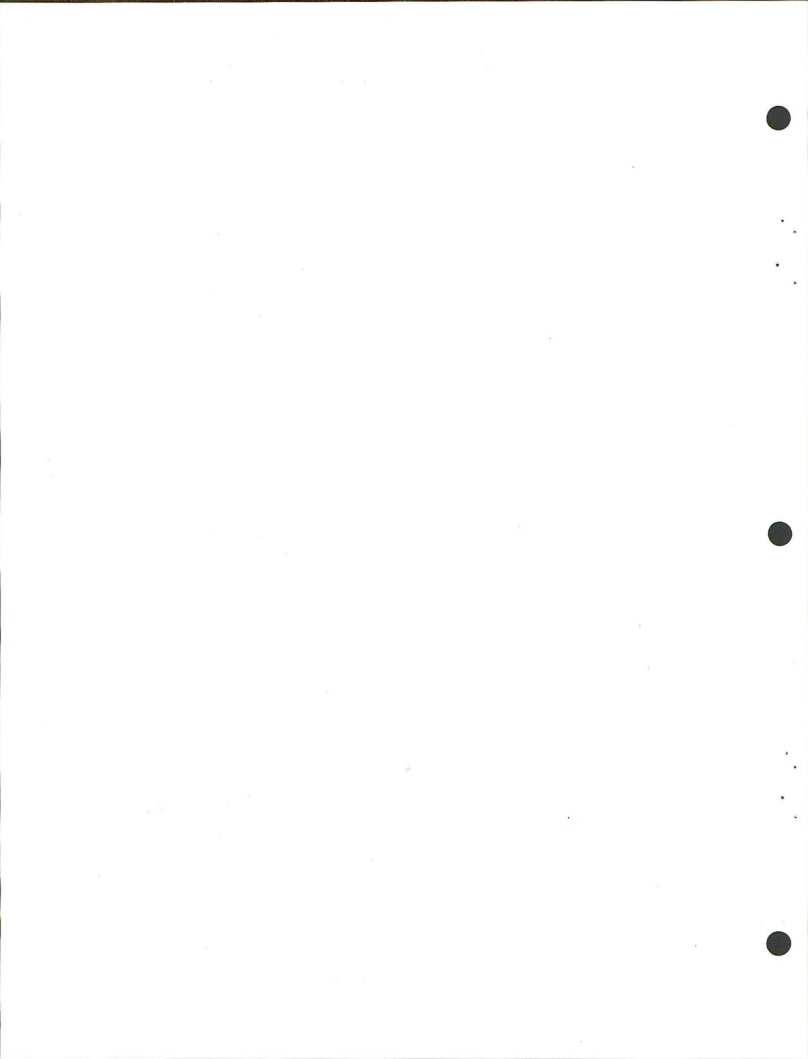
Orin Harris

Clark L. and Helen J. Talbut

Kenneth Miller and David Wood

APPENDIX E

Comment Letters and Responses





BLM Bishop Resource Area  
 Mr. James Morrison, Area Manager  
 873 North Main St., Room 201  
 Bishop, CA 93514

Re: Fish Slough DEIS

Dear Mr. Morrison:

The Draft Management Plan for the Fish Slough Area has been reviewed. The planned actions are considered inadequate in that uncontrolled public and animals will still have access to the critical areas. The plan to restrict vehicles is understood, but any problems you will encounter will be with people and dogs, and not vehicles.

- 1-1 The critical area, such as zone one, should be fenced off from all human, vehicle, and animal activity.

Designated roads are a satisfactory management and can be rerouted as necessary to avoid critical areas. This is a much better way than just closing them.

- 1-2 Archaeological and cultural sites should not be publicized as this attracts undesirable activities. At this point it may be well to fence off the known sites to protect them or develop them into fenced off public awareness sites. Nevada has done this quite successfully in the Carson District.

- 1-3 Wilderness designation of this particular area would serve no practical value to users. Livestock, biological or archaeological research. It would probably be better to protect wildlife and cultural sites through Wildlife Refuges (RTE) and the Antiquities Act which provide greater protection and more latitude for scientific research.

We thank you for allowing us to comment.

Sincerely,

*Ed Dunkley*  
 Ed Dunkley  
 Administrator

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June 22, 1984

Comment Letter No. 1

5631 Rosebud Lane, Unit M-1  
 Sacramento, CA 95811  
 (916) 338-4540

Response to Letter No. 1

- 1-1 At this point in time it is not deemed necessary to fence the Fish Slough Ecological Area (Zone 1) in its entirety. Rather, it is felt that the current enclosures at the Owens Valley Native Fish Sanctuary and BLM Spring combined with the planned 200 acre enclosure in Section 31 (planned action 2) will provide needed protection of critical marsh areas from motor vehicles and livestock. "Human" use is only a problem as it relates to vandalism. It is hoped that increased patrols by BLM, DWP and CDF&G personnel combined with a public awareness elements (planned actions 5 and 11) will alleviate this problem.
- 1-2 The Bishop Petroglyph Loop Cultural Resource Management Plan ( ) specifically addresses planned efforts to protect archeological and cultural sites within the ACEC. Copies of this plan are available at the Bishop Resource Area Office.
- 1-3 The areas identified in Figure 10 are Wilderness Study Areas as identified in the Draft Environmental Impact Statement on Preliminary Wilderness Recommendations-Benton-Owens Valley/Bodie-Coleville Study Areas (August 12, 1983). No final designations have been made to date.

Area Manager,  
 Bishop Resource Area  
 Bureau of Land Management  
 873 North Main Street  
 Suite 201  
 Bishop, California 93511

RE: Fish Slough ACEC Designation

Dear Sir:

I am writing to express my strong support for the proposed action of designating the entire surface watershed and a portion of the northern aquifer as an area of critical environmental concern (ACEC). The three alternatives being considered are, I feel, totally unacceptable because of the serious impacts that would result from groundwater drawdowns.

2-1

As a native Californian, I have visited the Owens Valley area often and consider it to be a unique and valuable resource that must be protected. I think this action is especially timely in light of the fact that the city of Los Angeles owns lands adjacent to the area in question and will be looking to alleviate ~~water~~ <sup>water</sup> problems at whatever cost to land and resources. This action is to be commended for it provides the firm protection that is needed.

53

Sincerely,

*Sylvia Thomas*  
 Sylvia Thomas  
 1231 Vicente Dr. #48  
 Sunnyvale, Ca. 94086

2-1 The underlying management philosophy for the Volcanic Tablelands within the ACEC (Zones 2 and 3) is to "protect and preserve the quality and quantity of the groundwater aquifer" which supports Fish Slough. In addition it is hoped that planned actions 6, 7 and 9 will provide much needed information regarding groundwater characteristics. Planned actions 15 and 16 will then allow for more flexibility in our management so that new information can be used and adjustments within management actions can be made so long as they are insistent with our overall management objections as spelled out in the ACEC Management Plan.

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STATE OF CALIFORNIA—RESOURCES AGENCY  
 DEPARTMENT OF WATER RESOURCES  
 P. O. Box 6598  
 LOS ANGELES  
 90055

GEORGE DEUKMEJIAN, Governor



UNL 11 1884

Mr. James S. Morrison  
 Area Manager  
 Bureau of Land Management  
 Bishop Resource Area  
 873 N. Main Street, Ste. 201  
 Bishop, CA 93514

Dear Mr. Morrison:

Draft Management Plan for Fish Slough, June 1984, SCH 84061802

As you requested in your letter of June 15, 1984, we have reviewed the subject report and have no comment to offer on it.

Thank you for the opportunity to review this report.

Sincerely,

*Robert Y. D. Chun*  
*by Gary Federman*

Robert Y. D. Chun, Chief  
 Planning Branch  
 Southern District

cc: Office of Planning and Research  
 State Clearinghouse  
 1400 Tenth Street  
 Sacramento, CA 95814

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Area Manager
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Keith W. Whitson, P.E.  
 1231 Vicente Dr. 748  
 Sunnyvale, CA 95086

Area Manager  
 Bishop Resource Area  
 Bureau of Land Management  
 873 N Main ST suite 201  
 Bishop, CA 93524

July 14, 1984

SUBJECT: Draft Management for Fish Slough AGDC

As stated on page one of the plan, "the uniqueness of Fish Slough goes beyond the fish, wildlife and vegetation values." I fully agree with long range management objective # 2: "to preserve the integrity of the Fish Slough ecosystem by protecting and maintaining the quality and quantity of the groundwater aquifer that supports it." The following are my specific comments:

Designation of The Management Area

Page 13: "Since surface flow into Fish Slough is not a significant component of the hydrologic system, it is the boundary of the surrounding aquifer and associated recharge areas that should determine the perimeter of the management area."

Page 30: "Reductions in water supply from uses entirely outside the management area could have a profound catastrophic impact upon Fish Slough resources."

4-1

Question: If the management area has been determined by the boundaries of the aquifers tributary to Fish Slough, how can manipulation of water resources outside the management area have any impact upon Fish Slough?

4-2

Question: Have the well developed alluvial fans of the White Mountains been investigated as a possible source of tributary groundwater considering:

- 1) Precipitation in the upper White Mountains is about triple that of the management area.
- 2) Alluvial deposits are very pervious and are generally an excellent location for subsurface flow.
- 3) Topography of the area suggests that a subsurface gradient would be in the direction of Fish Slough.

4-3

Question: If runoff or subsurface flow from the White Mountains is a tributary component of the Fish Slough hydrologic system, why hasn't the AGDC been extended further east?

**RECEIVED**  
BUREAU OF LAND MANAGEMENT  
BIOLOGICAL RESOURCE AREA  
JUL 18 1984

Mr. [ ]	Area Manager
Mr. [ ]	Chief
Mr. [ ]	Assistant Chief
Mr. [ ]	Section Chief
Mr. [ ]	Staff
Mr. [ ]	Supervisor
Mr. [ ]	Assistant Supervisor
Mr. [ ]	Field Supervisor
Mr. [ ]	Field Assistant
Mr. [ ]	Field Observer
Mr. [ ]	Field Technician
Mr. [ ]	Field Worker
Mr. [ ]	Field Helper
Mr. [ ]	Field Laborer

4-4

Definition of Management Objectives

Do either "multiple use" or "management actions" include the diversion of surface waters or the pumping of groundwater within the proposed A.D. or any of the adjacent watersheds?

4-5

Involvement of Los Angeles BLM

Para A on page 7 states that the AGDC comprises public (BLM) and private (L.A.S.P) lands. The city of Los Angeles is a municipal corporation and a public agency. Therefore, all lands within the proposed AGDC are in public ownership, whether by federal or local governments.

I believe that all BLM lands within the AGDC should be dedicated to the BLM. The sole purpose of the AGDC is to provide water and power to the city of Los Angeles; this point has been proven by their track record in the Owens Valley and the Mono Basin. There seems to be a conflict of interests here.

4-6

In summary, the AGDC designation is a move in the right direction to preserve this valuable resource. Further consideration should be given to extending the management area eastward to the National Forest lands thereby including the drainage of the White Mountains. The BLM has a proven track record in water exploitation and environmental neglect and should not be a participant in this plan. Lands under L.A. ownership should be dedicated or leased to the BLM.

Thank you for this opportunity to comment on the draft Management Plan for Fish Slough AGDC. Please consider my concerns as those of an outdoor recreation enthusiast, a conservationist and a registered civil engineer familiar with topics in water resources management.

cc Toljoe Chapter Sierra Club



Response to Letter No. 4

- 4-1 The proposed boundary of the ACEC was selected to afford the greatest protection to the significant resources of Fish Slough based upon the best available information. While the statement made on page 13 is true we do not feel that enough information is available to definitively describe the total aquifer and associated recharge areas which influence Fish Slough. Therefore, we have chosen to base our ACEC boundary on the deepest zone of the aquifer, as we believe it to be, using geologic evidence. It is hoped that by doing so we will include enough of the aquifer to afford some protection to Fish Slough. The statement made on page 10 recognizes our limited understanding as to the extent of the aquifer and serves to highlight the fact that our monitoring efforts may need to focus beyond the actual ACEC boundary. The planned development of a monitoring program (planned action 16) will need to take this into account.
- 4-2 No. This is a good point and possibly something which can be included for investigation as part of planned action 9.
- 4-3 See response to 4-1.
- 4-4 Yes to both questions. Planned actions 6, 7, 8, 9, 10, and 16 are primarily aimed at evaluating and/or monitoring the effects of surface water diversions or groundwater pumping within the proposed ACEC. The joint Management Committee will then use this information to further develop management guidelines within the ACEC.
- 4-5 Error noted and corrected.
- 4-6 If new evidence becomes available illustrating the significance of the White Mountain drainage to maintaining the Fish Slough ecosystem this can be addressed by the joint Management Committee.

Department of Water and Power  the City of Los Angeles

JOHN BRADLEY  
Mayor

Commissioners  
 DONALD LITTON, President  
 EDUARDO G. HERRERA, Vice President  
 JORGE A. GARCIA  
 NARLEY SILVERMAN  
 CAROL MULLIGAN  
 ELLIOT K. DAVINIS, Secretary

PAUL H. LANE, General Manager and Chief Engineer  
 NORMAN L. SILVERMAN, Chief Planning and Research Manager  
 DEAN E. J. HERRING, Chief Engineer of Water, Flood and Sewerage Management  
 NORMAN J. PETERLIN, Chief Engineer of Public Works

July 17, 1984

Mr. James Morrison  
 Area Manager  
 Bureau of Land Management  
 873 North Main Street  
 Bishop, CA 93514

Dear Jim:

Draft Management Plan - Fish Slough ACBE

The Department has reviewed the most recent Draft Management Plan for Fish Slough and would again offer comments and suggestions similar to those stated in our letter of June 1, 1984 on certain aspects of the plan that we feel are in need of clarification.

- As stated in previous comments, the Department supports the general concept of the Management Plan; however, the signature sheet which shows "Approved By" the BLM, Bishop Area Manager, and "Concurred in By" other agencies still shows the Department of Water and Power signature to be the Northern District Engineer. I would, again, suggest that this may not be the appropriate format, as certain commitments may require the signature of the General Manager and approval of our Board of Water and Power Commissioners.

This issue would be especially sensitive under Plan Actions, Item 15, on pages 28 and 29, which provides for implementation under a Joint Management Committee. Certain activities or projects may be recommended by other agencies that, while being appropriate for the objectives of those agencies, may be in opposition with the established policy for City of Los Angeles owned or current lease practices. I feel that a Memorandum of Understanding, on specific management actions, may be a way to approach this problem.

- The Department is pleased to see that the development of a cooperative livestock management plan, separate from the ACBE Management Plan, has been considered. Although the Department has for many years cooperated with the BLM and Department of Fish and Game in the management of the

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Mr. James Morrison

- 2 -

July 17, 1984

resources in Fish Slough without the benefit of a specific cooperative management agreement, we would again recommend that such an agreement, or Memorandum of Understanding, now be prepared.

- 5-3
- Corrections are still needed on page 16 for spelling of scientific names for the milkvetch (*Astragalus lentiginosus*), the golden eagle (*Aquila chrysaetos*), and the prairie falcon, (*Falco mexicanus*). Also, it should be noted that the plant *Centaureum nanophyllum* var. *nevadensis*, is not a candidate species.

Thanks again for the opportunity to offer comments.

Sincerely,

*E. Duane D. Buchholz*  
 DUANE D. BUCHHOLZ  
 Northern District Engineer  
 Los Angeles Aqueduct Division

Response to Letter No. 5

- 5-1 Change made.  
 5-2 Recommendation noted. MDU being draft  
 5-3 Corrections made.



TED HILTON  
Planning Director

## PLANNING DEPARTMENT

DRAWN L. • INDEPENDENCE • CALIFORNIA 93502  
1070 878-2411 (Ext. 300, 307, 310)

July 12, 1984

Jim Morrison, Area Manager  
Bureau of Land Management  
Bishop Resource Area  
873 N. Main St., Ste 201  
Bishop, California 93514

Subject: DRAFT MANAGEMENT PLAN FOR FISH SLOUGH

Dear Jim:

The Inyo County Planning Department has reviewed the proposed Management Plan for Fish Slough, An Area of Critical Environmental Concern (Fish Slough Plan). We wish to thank you for giving our agency the opportunity to review and comment on the document.

As you are already aware, sec.202(9) of FLPMA mandates to the extent practical for staff to resolve inconsistencies between Federal and non-Federal generated plans. The Fish Slough Plan as written is consistent with the BLM Benton/Owens Valley Frame Work Plan, BLM Livestock Grazing Management Plan for the Benton/Owens Valley Planning Unit, the BLM Motor Vehicle use Designation Plan, the Conservation and Open Space Element of the Inyo County General and the Circulation Element of the Inyo County General Plan.

The inconsistencies we have found are as follows:

1. "Map 10-A South Benton MGT Area" of the BLM Frame Work Plan identifies a Fish Slough Water Fowl Habitat Management Area and Spring Area consisting of about 400 acres in Mono County and only about five to ten acres in Inyo County. The Proposed Fish Slough ACEC has been expanded to 39,360 acres or an expansion almost 100 times greater than the area identified in the Frame Work Plan. In Inyo County the proposed ACEC will be increased to 3,520 acres, or an expansion 350 to 700 times greater than the Frame Work Plan.
2. "Map 10-B South Benton MGT Area Grazing Decisions" of the Frame Work Plan, shows the boundaries of Allotment 6007 and 6043 differently than Figure 11 Range Management Facilities Fish Slough ACEC.
3. "Map 1 Existing Grazing Management" of the Benton/Owens Valley Grazing Valley Grazing Environmental Impact Statement also as Map 10-B above, shows the boundaries of Grazing Allotments 6007 6043 differently than Figure 11 Range Management Facilities Fish Slough ACEC.

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4. We are concerned that Allotments 6007 and 6043 may incur a "negative socio-economic impact to grazing operations within the proposed ACEC". It appears this would be a contradiction to already adopted Frame Work Plan and Grazing Management Plans which give the operators a view of little or no impact since these plans do not envision a 40,000 acre ACEC.
5. The BLM Motor-Vehicle Use Designations Plan recognizes the existence of County Road 1039 "Casa Diablo Road". Whereas we fear by viewing Figure 3 "Major Access Routes-Fish Slough ACEC", that BLM may be considering the closure of this road.
6. The Circulation Element of the Inyo County General Plan recognizes the existence of the Casa Diablo Road. We are concerned the proposed Fish Slough Plan may be the grounds for the closure of this road.
7. The Conservation and Open Space Elements of the Inyo County General Plan have identified 400 acres +/- in Fish Slough as an Environmental Resource Area to protect the Owens Valley Pupfish and rare and endangered plants located in the Fish Slough portion of Inyo County. Whereas the BLM Bishop Area Office through the Frame Work Plan only recognizes 5 to 10 acres of land eligible protection through a Water Fowl Habitat Management Area. We have never felt this action of the Frame Work Plan as being adequate. Today the proposed Fish Slough Plan is proposing to designate approximately 3,520 acres of ACEC in Inyo County, an expansion of 3,120 acres more than the County ERA designation. We are puzzled why the Bishop Area Office BLM does not recognize the environmental resources of Fish Slough (in Inyo County) in the Frame Work Plan. Whereas the same BLM office presents a proposal through the Fish Slough Plan which consumes most of Fish Slough and surrounding volcanic table land.
8. When viewing Figure 6 Hydrolic Boundaries- Fish Slough ACEC, we find the proposed ACEC boundaries are not consistent with the boundaries of both the watershed and inferred aquifer (deener zone) of Fish Slough. The boundaries in Inyo County appear generally to be inconsistent by 1/2 mile to 3/4 mile. There apparently is no justification stated in the Fish Slough Plan for placing ACEC designation beyond the watershed and aquifer boundaries. It is our view that it appears unjustified to expand the ACEC boundaries beyond the riparian vegetated areas and wetlands of Fish Slough.
9. In past, the BLM has presented plans to the public for review and comment that presented a description of proposed action and alternatives of the "Proposed Action", "Alternative 1", "Alternative 2" and "Alternative 3" in the environmental document. The Fish Slough Environmental Assessment utilizes some 33 pages of Maps, figures and text to address the Proposed Action. Whereas Alternatives 1, 2 and 3 are only briefly stated on pages 38, 39 and 40. We view this as being unfair since only the proposed action is presented in detail, thus giving an incomplete view of all other alternatives.

10. The Benton/Owens Valley Frame Work Plan on page 8 under Management Decisions, 6, Lands Realty, states the "withdrawals on public land will be revoked unless specifically and unequivocally shown to be necessary for the declared purpose of the withdrawal". We do not understand why the Public Land Withdrawals shown on Figure 5, page 11 and page 9 of text of the Fish Slough are presented; they should be revoked.

The Fish Slough Plan has been a departure from past Bishop Area Office plans in that the County was not invited to participate in the formulation process.

If you have any questions pertaining to our response, please do not hesitate to contact this office.

Sincerely,

Ted Hilton  
Planning Director  
*Gerry Bylong*  
Gerry Bylong  
Associate Planner

GB/ww

Response to letter No. 6

- 6-1 The Waterfowl Habitat Management Area identified in Map 10-A of the Benton/Owens Valley MFP is that area to be protected as planned action No. 2 in the ACEC plan. Also the MFP decision did not designate the Fish Slough area as an ACEC but recognized the need to do so. That designation is being done as a result of this plan.
- 6-2
- 6-3 See response 6-2.
- 6-4 This plan is intended to complement, not contradict, the MFP and Grazing EIS. Any changes which might come about as a result of developing a cooperative livestock grazing program (planned action 4), for example, would constitute a modification of one MFP and would follow appropriate public review processes.
- 6-5 The closure of Casa Diablo Road (County Road 1039) is not being considered as part of this plan.
- 6-6 See 6-5.
- 6-7 The Benton/Owens Valley Decision (06/28/82) was to designate the Fish Slough Ecological Area (FSEA) as an "ACEC or other suitable designation." The FSEA was an area identified in a draft ROD between the BLM, CDWG, LADWP and the University of California and in fact corresponds to Zone 1 of the proposed Fish Slough ACEC. The actual ACEC boundary was subsequently determined as explained in response 4-1. The Waterfowl Habitat Management Area discussed in the MFP and subsequently the area of planned action No. 2 is within the FSEA and an area which was identified as being in need of more site specific action.
- 6-8 The ACEC boundary was determined so as to correspond as closely as possible to known or inferred hydrologic boundaries. In some cases it was felt that, primarily for administrative purposes (i.e. legal descriptions), placing the boundary along section lines was the best alternative.
- 6-9 The proposed action is specifically discussed on pages 24 thru 33 (9 pages) with the first 23 pages providing background which would also apply to the three alternatives. In addition alternatives 1 and 2 would designate smaller areas as the ACEC with the assumption that planned actions as described in Section VI would be implemented only if they were within the alternatives ACEC areas. While we may not have gone into as much detail as discussing the alternative we feel that we have been fair in their treatment.
- 6-10 The public land withdrawals as illustrated on page 11 remain "on-the-books." While they may have been targeted for revocation in the MFP decision the process has yet to be completed.



SIERRA CLUB '84

Toiyabe Chapter - Nevada and Eastern California

Jim Morrison  
c/o Area Manager  
Fishop Resource Area  
375 N. Main St.  
Elko, NV, 89314

Dear Jim,

Thankyou for the opportunity to comment on the draft management plan for the Fish Slough ACEC. Each of the following components are to be praised:

1. Long range management goals (objectives)
2. Management philosophy
3. Major recommendations

We offer minor suggestions in the goal and monitoring areas.

Goals: a) Sensitive plants are not specifically addressed. Specific protections should be spelled out. ( i.e. grazing in the 6004 allotment could be shortened by 2 months to allow flowering and seeding, if these species are located in this area)

b) Shortened grazing period in all otment 6004 would benefit nesting waterfowl and marsh birds. " Fair" condition of the area is inadequate.

Monitoring: local organizations like Eastern Sierra Audubon and Native Plant Society would like to participate in censusing and monitoring and should be invited to participate.

Finally, the plan is a good one and we look forward to its speedy implementation.

Sincerely,

*Miss. Leil. Roberts*

Blaine Trainer Secretary, Eastern Sierra Nevada Committee

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Comment Letter No. 7

Box 4-4  
Lone Pine, CA. 93545  
July 13, 1984

Response to Letter No. 7

7-1 Your point is well taken. It is hoped that thru planned action No. 13 we will learn more about sensitive plant distribution within the ACEC. In addition planned action No. 15 should provide enough flexibility so that management activities within the ACEC can be coordinated with resources needs. In the mean time existing or planned enclosures should provide a measure of protection to sensitive plants.

7-2 As we develop the monitoring program for the Fish Slough ACEC (planned action 16) your suggestion will be kept in mind.

60 7-1

7-2

Resources Building  
1416 Ninth Street  
95814

GEORGE DEUKMEYER  
GOVERNOR OF  
CALIFORNIA



THE RESOURCES AGENCY OF CALIFORNIA  
SACRAMENTO, CALIFORNIA

Department of Conservation  
Department of Fish and Game  
Department of Forestry  
Department of Sealing and Waterways  
Department of Parks and Recreation  
Department of Water Resources

Comment Letter No. 8

AN RESOURCES BOARD  
California Coastal Commission  
California Conservation Corps  
Colorado River Board  
Energy Resources Conservation  
and Development Commission  
Regional Water Quality  
Control Boards  
San Francisco Bay Conservation  
and Development Commission  
Solid Waste Management Board  
State Coastal Conservancy  
State Lands Commission  
State Reclamation Board  
State Water Resources Control  
Board

UNIVERSITY OF CALIFORNIA

Comment Letter No. 9



BERKELEY · IRVINE · LOS ANGELES · RIVERSIDE · SAN DIEGO · SAN FRANCISCO

JUL 19 1984

OFFICE OF THE PRESIDENT OF THE CALIF.

DONALD PERDUE CARLNER  
President

JAMES R. KENDRICK JR.  
Vice President, Agriculture  
and Natural Resources

July 18, 1984

Mr. James Morrison  
Bureau of Land Management  
873 N. Main St., Suite 201  
Bishop, CA 93514

July 19, 1984

Dear Mr. Morrison:

The State has reviewed the Draft Management Plan, Fish Slough, submitted for review through the Office of Planning and Research.

Review of this document was coordinated with the State Lands Commission, Water Resources Control Board, and Departments of Conservation, Fish and Game, Parks and Recreation, Water Resources, Health Services, and Transportation.

We have received no adverse comments from any of the reviewing entities. Therefore, the State will have no comment on this report.

Thank you for providing it for review and comment.

Sincerely,

*Gordon F. Snow*  
Gordon F. Snow, Ph.D.  
Assistant Secretary for Resources

cc: Office of Planning and Research  
1400 Tenth Street  
Sacramento, CA 95814

(SCH 84061802)

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Jim Morrison  
Area Manager  
Bureau of Land Management  
Bishop Resource Area  
873 N. Main Street, Suite 201  
Bishop, California 93514

Mike Aceltuno  
State Office Fishery Biologist  
Bureau of Land Management  
California State Office  
2800 Cottage Way  
Sacramento, California 95825

Dear Jim and Mike:

Thank you for the opportunity to review and comment on the Draft Management Plan for the Fish Slough Area of Critical Environmental Concern (ACEC).

On behalf of the University of California's Natural Reserve System, I endorse the Draft Management Plan as one which reflects the compromises and agreements reached among the five cooperating agencies during preparation of the plan. My colleagues and I am grateful for the leadership you have provided in pursuing our common objectives. Beyond these general comments, we have several minor suggestions or corrections to make and these are identified in red on the attached draft.

Sincerely,

*J. Roger Samuels*  
J. Roger Samuels  
Director  
UC Natural Reserve System

cc: Dan Dawson  
Wayne Furren  
Jeff Kennedy

320 UNIVERSITY AVENUE  
BERKELEY, CALIFORNIA 94720

415/644-4211

Southern California Edison Company

P.O. BOX 818  
271 LONG BEACH BLVD.  
LONG BEACH, CALIF. 90801-8188

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CALIF STATE OFFICE  
SACRAMENTO, CALIF.

C. J. LAWRENSON, JR.  
MANAGER  
OF  
RIGHT OF WAY AND LAND

July 31, 1984

Mr. Mike Aceituno  
Bureau of Land Management  
California State Office  
2800 Cottage Way  
Sacramento, CA 95825

Dear Mr. Aceituno:

SUBJECT: Fish Slough  
Area of Critical Environmental Concern (ACEC)  
Draft Management Plan

Per your telephone conversation of July 26, 1984 with  
Mr. L. R. Salas of this office, the Southern California Edison  
Company appreciates the opportunity to comment on the above  
Draft Management Plan.

Based on our review and our current information, we have the  
following comments and recommendations for your consideration.

Located in Zone 2, in Sections 25 and 36, Township 4 South,  
Range 31 East, there are two existing transmission lines running  
in a north-south direction. These transmission lines have been  
identified and a 1/2 mile wide corridor has been proposed in the  
preliminary Wilderness recommendations for the Benton-Owens  
Valley Bodie-Coleville study area.

In order to remain consistent with the Bureau's Wilderness  
study, it is our recommendation that the most northwesterly  
boundaries of Zone 2 be adjusted so that the existing  
transmission lines and the proposed corridor will be located  
outside of the ACEC.

Thank you for inviting our comments, we hope you will give them  
your full consideration. If further details are needed, please  
contact Mr. L. R. Salas at (213) 491-2849.

Very truly yours,

C. J. Lawson, Jr.  
DLH

10-1 See response 4-1 for a description of how ACEC boundary was estab-  
lished. While the transmission line corridor was not included  
within the area recommended as suitable for preservation as wilder-  
ness we feel that its inclusion within the ACEC is inconsistent  
with planned objectives.

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